Health Our Choice For Life

The Health of Children and Youth in British Columbia:

ISSUES FOR HEALTH PROMOTION

DISCUSSION PAPER

Prepared for:
The Office of Health Promotion
British Columbia Ministry of Health
By: Sharon Bearpark, M.D.
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OFFICE OF
HEALTH PROMOTION
Ministry of Health
1515 Blanshard St.
Victoria, B.C.
V8W 3C8

TOGETHER WE CARE

THE HEALTH OF CHILDREN AND YOUTH IN BRITISH COLUMBIA: ISSUES FOR HEALTH PROMOTION

EXECUTIVE SUMMARY

1.0 PURPOSE

This report has been prepared for the Office of Health Promotion (OHP), British Columbia, Ministry of Health. The purpose of the report is to outline a summary of the outstanding, current and future issues that impact on the health of children and youth* in British Columbia, and the role the Office of Health Promotion might play in addressing these issues. Also highlighted in the document are 'gaps' in current children's health research that need further investigation. The report is meant to be utilized as a "starting point". It is hoped that the issues identified here will influence future policy and programs for the healthy development of children and youth in our province.

2.0 PRIORITY AREAS FOR ACTION

Age specific health data for children and youth in British Columbia are outlined in the document. Four priority areas for action are highlighted. These include:

1) Addressing the health of '<u>special needs groups</u>', in particular:

   - Native
   - poor, and
   - disabled children and youth.

2) Prevention of <u>low birth weight and prematurity</u>.

3) Prevention of <u>injury and poisoning</u> in children and youth, and

4) The promotion of 'emotional well-being' or <u>mental health</u> of children and youth, and <u>family functioning</u>. This action area includes:

   - maladaptive behaviours in children and youth (including alcohol and drug abuse, eating disorders, delinquency and suicide);
   - maladaptive behaviours in adults (including child abuse, exploitation and sexual abuse), and
   - the mediating effects of social networks (including the family) on health.

* (for the purpose of this document children are defined as those from birth up to and including 19 years of age)

3.0 RECOMMENDATIONS

The following recommendations are made in order for the Office of Health Promotion to address future challenges in promoting the health of children and youth in the province.

A. INTERSECTORAL ACTION:

The Office of Health Promotion should participate in intra and interministerial committees in order to advocate for the setting of appropriate priorities, action strategies and health policies which would enable children and youth to reach their full health potential. These would be determined in concert with other government, health professional and community partners.

B. PRIORITY SETTING:

The Office of Health Promotion should recommend that the interministerial committee focus on the four priority areas for action outlined in the report ie. the health needs of native, poor and disabled children and youth; the prevention of low birth weight and prematurity; the prevention of injury and poisoning and the promotion of emotional well-being of children and youth. Provincial health goals and objectives should be established in these areas in 1990.

C. APPROACH/FOCUS:

I. FAMILY:

a) The Office of Health Promotion should endorse the <u>family</u> as the preferred focus for health programming.

As an active participant with major health program providers the OHP should advocate for the following:

- that parents, children and youth be included in the definition of priority action areas as well as the design and implementation of health programs targetted to them;
- that health promotion programs for young people be supported by family members; and
- that peer support programs be encouraged particularly in cases where families are not functioning optimally.

b) The Office of Health Promotion should recognize that not all families have the resources to ensure optimal health for their children.

- The OHP should recommend continued endorsement of programs including:

  i) those that focus on prenatal outreach in regions of the province with low birth weight above the provincial average

  ii) implementing "Nobody's Perfect" on a province-wide basis, and

  iii) supporting Native health initiatives through participation in intraministerial committees.

c) The Office of Health Promotion should endorse supportive care programs and services for children and their families.

- The OHP should recommend the support of creative child care and youth programs which are provided within the <u>family</u> context as a preferred alternative to institutional care.

II. SETTINGS:

The Office of Health Promotion should endorse both the school system and the community as primary foci for action in promoting awareness and adoption of healthy lifestyle choices for children and youth and for the creation of environments that support health.

- The OHP should recommend:

  i) providing assistance and support for the training of educators for the Ministry of Education's 'Living and Learning' Curriculum.

  ii) development of the "Healthy Schools" program

  iii) continued support for 'Healthy Communities' initiatives including programs such as KIDSPLACE particularly in high growth areas of the province, and for inner-city and Native children, and

  iv) encouraging evaluation of these programs.

D. HEALTHY PUBLIC POLICY:

The Office of Health Promotion should endorse healthy public policy that impacts positively on children and youth in the province.

- The OHP should recommend that policy initiatives be pursued in the following areas:

  i) the implementation of tobacco use reduction strategies that restrict access to tobacco for minors and discourage smoking initiation among young girls in particular

  ii) the enforcement of seatbelt legislation, speed limits, motor vehicle inspections, the use of bicycle helmets and drinking and driving penalties to decrease child injuries from motor vehicle collisions

  iii) the development of strategies in the area of reproductive health and sexually transmitted diseases which are sensitive to and keep pace with changes in the socio-demographic make-up of the province and values of its citizens, and

  iv) the development of safe consumer products and medication dispensation to diminish poison risks for pre-school children.

E. RESEARCH:

The Office of Health Promotion should collaborate with members of the interministerial committee to identify health research priorities for children and youth in the province.

- The OHP should initiate a study of the health needs of poor children in the province.

- The OHP should recommend that the Hospital-Community Partnership Program support research in the four priority areas for action outlined in the report.

ACKNOWLEDGEMENTS

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Development of the ideas in this report was assisted by Dr. Roger Tonkin and the BC Child Health Profile Project. Thanks are also extended to Dr. Terry Russell (Ministry of Health), Mr. Gerry Fisher (Arbutus Society), Dr. Brian Wharf (University of Victoria) and Dr. Sam Sheps (University of British Columbia) who met with the author and provided direction in the collection of data and materials for the paper.

Mr. Doug Wilson (Ministry of Health) provided insight and assistance concerning the current status of Native Health in British Columbia.

No report is ever the work of one individual and the author extends thanks to all those who assisted in the development and preparation of this document.

THE HEALTH OF CHILDREN AND YOUTH IN BRITISH COLUMBIA: ISSUES FOR HEALTH PROMOTION

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DATA INTERPRETATION NOTES

British Columbia morbidity and mortality data for children aged 0-19 years has been obtained from the BC Ministry of Health divisions of Vital Statistics, Hospital Programs, Mental Health Services and the Health Planning Database.

Mortality data:

All mortality data was originally derived from the Division of Vital Statistics. Data derived from the Health Planning Database does not exactly match the data which is found in Annual Reports from Vital Statistics. A major cause of this discrepancy is due to the fact that data in the Annual Reports are as of March 31 of each year and are updated on a continuing basis. Health Planning Database data on the other hand are reported as of November 30 of the same year.

Hospital Morbidity Data:

- *For the < 1 year age group, the data reported in Figure 5 exclude Canadian Diagnostic Short List Code (CDSL) 209 or* ***live healthy births.***
- *Data from the Health Planning Database include non-residents of BC, and all care levels (ie. day surgeries, acute rehabilitation, long term and extended care)*
- *Hospital cases = hospital discharges and not individuals.*

1.0 PURPOSE

This report has been prepared for the Office of Health Promotion (OHP), British Columbia, Ministry of Health. The purpose of the report is to outline a summary of the outstanding, current and future issues that impact on the health of children and youth* in British Columbia and the role the Office of Health Promotion might play in addressing these issues. Also highlighted in the document are 'gaps' in current children's health research that need further investigation. The report is meant to be utilized as a "starting point" and it is hoped that the issues identified here will influence future policy and programs for the healthy development of children in our province.

* (for the purpose of this document children are defined as those up to and including 19 years of age).

2.0 BACKGROUND

Underlying the content of the document is the recognition of the dynamic quality, value and importance of children to our communities, the province and our future. Children are unique and are dependent on families, communities and government to create and sustain an environment which will provide them with the maximum opportunities to lead healthy and productive lives.

A large amount of information, research, opinion and expertise already exists in British Columbia and Canada concerning the health of children and youth. The wealth of information available is such that it may be difficult to get a coherent understanding of the health of children and areas that need further concern and attention. The issues highlighted in the document are not new, but are an attempt to synthesize the rich amount of data available to readers.

Major reports have already been compiled on the health of children and youth in British Columbia. Some of these have been reviewed for this document and include:

- The British Columbia Child Health Project (CHP) conducted in 1980-1986 and coordinated by Dr. Roger Tonkin provided a comprehensive review of the health status of BC's children and youth during this time period. (1-4)

- In 1982 The Social Planning and Reseach Council (SPARC) of British Columbia published a review of the status of children and youth in British Columbia. (5)

- The British Columbia Children's Hospital and associated colleagues have been instrumental in leading the field of children's health in British Columbia and sponsored a major symposium on "Redesigning relationships in child health care" held in Vancouver in February 1987. The symposium proceedings provide a wealth of information and challenges in the field of child health. (6)

- The Canadian Institute of Child Health (CICH) recently completed a comprehensive review of children's health in Canada. This provides the most up to date report on the status of child health across the country. (7)

Data was also compiled from: Statistics Canada, Vital Statistics, British Columbia Hospital Programs, the Health Planning Data Base and National Surveys of children and youth. (8-12)

Public reaction regarding the importance of children's health is known to be high. In the 1985 Canada Health Promotion Survey (13), British Columbia residents rated the most important health and safety topics for government to deal with. (see Table 1) Child health ranked second in importance and reflects public support for government policy and programming in this area.

Despite public recognition of the importance of child health and the fact that children constitute a significant proportion of the population, they are afforded little status or recognition in this province. "If we truly value our children, their lives and well-being, we must raise their status and acknowledge their fair claim to resources". (14)

Investing in prevention and better care for children will yield high returns in their health, improved productivity and the potential for cost savings over the duration of their lifetimes. It is essential that we recognize that although "the death rates for children may be at a very low level, the opportunity during childhood to influence health throughout life is unsurpassed". (15)

Gaps in the document will be evident as the paper is not meant to be a definitive review of all that is known on the health of children and youth in British Columbia or elsewhere. What is known is that despite existing data in this field, there is a sense that too much of what has been learned, has not been acted upon. There is a need to apply existing knowledge in order to affect sound health policy.

3.0 THE CHILD AND YOUTH POPULATION IN BRITISH COLUMBIA

The health of children and youth in British Columbia needs to be considered in the context of where and with whom they live; where they go to school; where they work and what community they are a part of. Almost 3 million people live in British Columbia including approximately 815,000 children under the age of 20 years who comprise over one quarter or 27% of the total population. Figure 1 illustrates a profile of the childhood population in British Columbia in 1988.

Included in the child population are approximately 29,000 registered Natives under the age of 20 who comprise 40% of the total registered Native population (see Table 2).

Most children in British Columbia live in urban areas however, tremendous regional, cultural and economic variability exists in the province. Each of these factors impact on the health of children and youth either directly or indirectly.

TABLE 1

Taking Action to Improve Health

Many Canadians believe it is very important for government to deal with health topics

Top 5 Issues in British Columbia

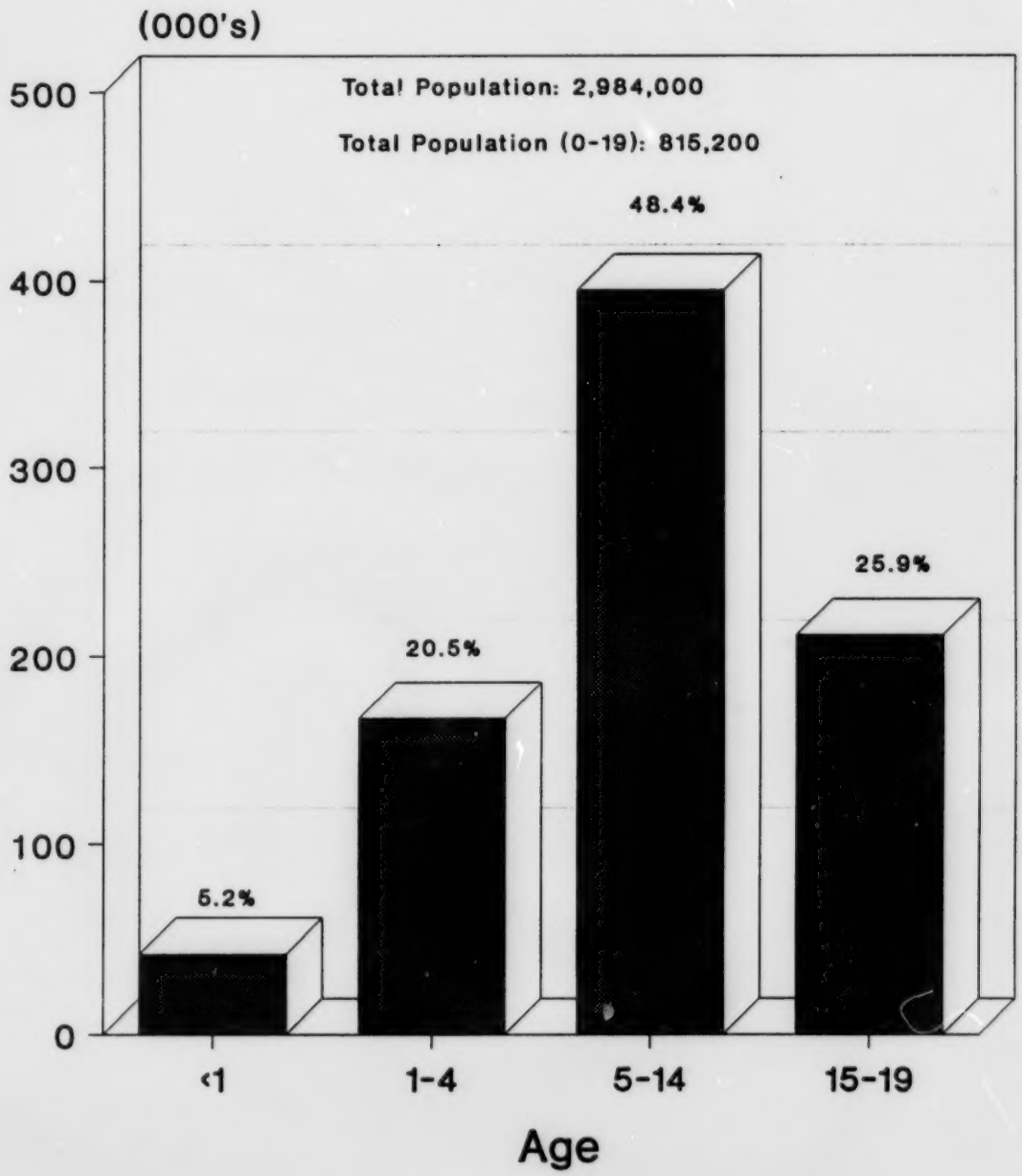
1.	Accident prevention on the road	80%
2.	Child health	75
3.	Alcohol	74
4.	Drug use	74
5.	Mental health	57

Source: 1985 Canada Health Promotion Survey

FIGURE 1

Children and Youth Population Profile

British Columbia, 1988



Source: Central Statistics Bureau, 1989

TABLE 2

Registered Natives in B.C.
1987

Total Population:	71,866
Population Under 20 Yrs.:	28,719
Proportion of Registered Natives Under 20 Yrs.:	40.0%

Medical Services Branch
Pacific Region

4.0 UNDERLYING PREMISES

The health issues raised in this document are based on six underlying premises:

4.1 THE CONCEPT OF HEALTH

The definition of 'health' has evolved from a disease centred concept that once focussed on the individual's responsibility for health to one which recognizes the contribution of the social and physical environment. Health is more than illness and death and is a part of everyday life and an essential dimension of the quality of our lives.

> "There is a need to view health from a broad perspective, built on the principle of comprehensiveness and not simply on the medical perspective" (16). This is not meant to negate or undermine the importance of medical services, but broader issues affecting the health of children need addressing."

For the purposes of this document, the World Health Organization's definition has been adopted:

> "Health is the extent to which an individual or group is able, on the one hand, to realize aspirations and to satisfy needs and, on the other hand, to change or cope with the environment. Health is therefore seen as a resource for everyday life, not as an objective for living; it is a positive concept emphasizing social and personal resources, as well as physical capacity." (17)

4.2 CURRENT HEALTH STATUS

"Today's young people are healthier than ever before" (18) and children in British Columbia are among the most fortunate in the world. For the majority of children, the prospect of self-fulfillment and life expectancy beyond 70 years is good. In 1988 the average life expectancy for British Columbian males was 74 years and that of females was 6 years higher or 80.3 years (19).

Generally speaking, most children in British Columbia enjoy a high standard of living and are well off in terms of their education, health and leisure opportunities. Despite progress made in the health of children and youth, major inequities exist particularly within the Native and poor populations.

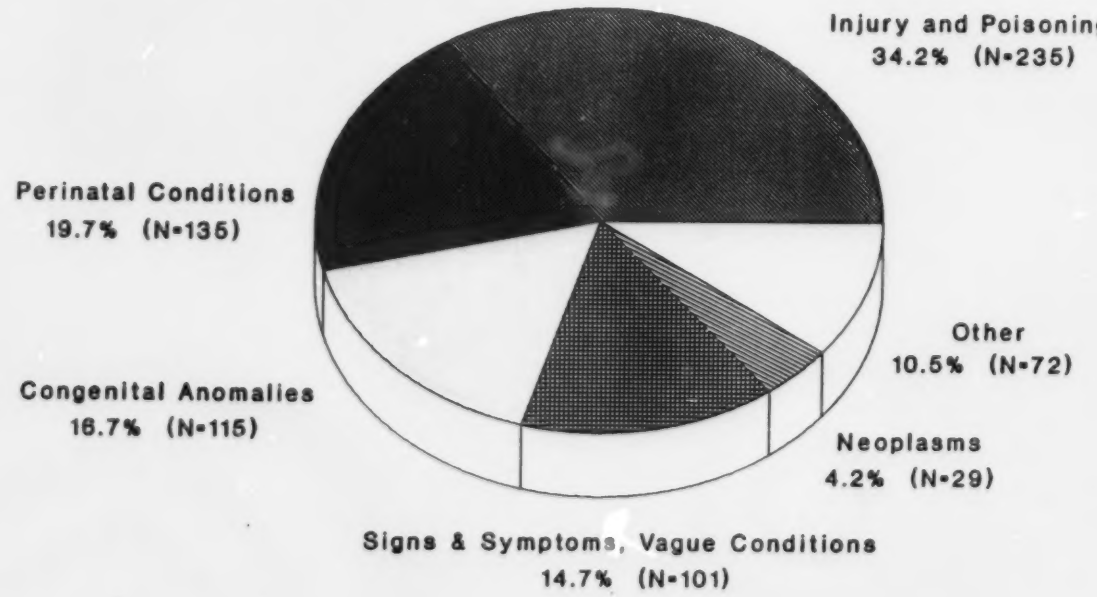
Mortality rates for children in British Columbia are declining, but still remain higher than other affluent nations and within the province specific groups including Natives and the poor have higher mortality rates than others. Figure 2 indicates the leading causes of death in British Columbia for children aged 0-19 years. The major contributors to child mortality include injury and poisoning (34.2%), perinatal conditions (19.7%), congenital anomalies (16.7%), vague conditions, signs and symptoms (14.7%), and all other causes (10.5%). Cancer was linked to 4.2% of child deaths in 1987.

FIGURE 2

1987

Six Leading Causes of Death in B.C.

Age Group 0-19 Years Old
Total Deaths = 687



Source: Division of Vital Statistics, 1987 (derived from Health Planning Database).

"Some 2% of children born alive still die by the age of 20. While less than a tenth of the loss at the turn of the century, the deaths that are still preventable continue to be a real challenge. For the other 98%, those members of the population who "graduate" to adulthood, the challenge is in some ways even greater".(20)

There has been a dramatic shift in the past 50 years away from 'biogenic' causes of morbidity and mortality. Infectious diseases no longer constitute the major threat to childhood due to the successful implementation of programs in immunization, sanitation and health care. The 'new morbidity' in childhood includes sociogenic causes of ill health such as; injuries from motor vehicle accidents, suicide, emotional and behavioural problems.

Figure 3 reflects the major causes of childhood hospitalization in 1987 in British Columbia. Excluded from the data in this report are "healthy births" which in 1987 accounted for 28,871 hospital cases. These cases were excluded from the data presented here as they do not constitute a category of preventable "illness". The remaining causes of hospitalization in childhood include: all other causes (30.6%), respiratory system diseases (22.9%), perinatal conditions (18.3%), injury and poisoning (14.3%), digestive system diseases (7.9%) and vague conditions, signs and symptoms (6.0%).

The major challenge for all health care providers, the Ministry of Health and society in general is to address the major inequities that remain for children and youth living in the province.

4.3 HEALTH INDICATORS

Traditionally the assessment of health status has been determined by mortality and morbidity data. This focus on mortality and morbidity centres on disease or illness and is therefore limited in its scope. It has to be acknowledged that 'health' reports concerning children are really expressions of ill-health and ideally one would prefer to measure 'health'.(21) Measures of health are difficult to come by and "no matter how much we may all wish to have good measures of 'positive' health, as yet few exist". (22)

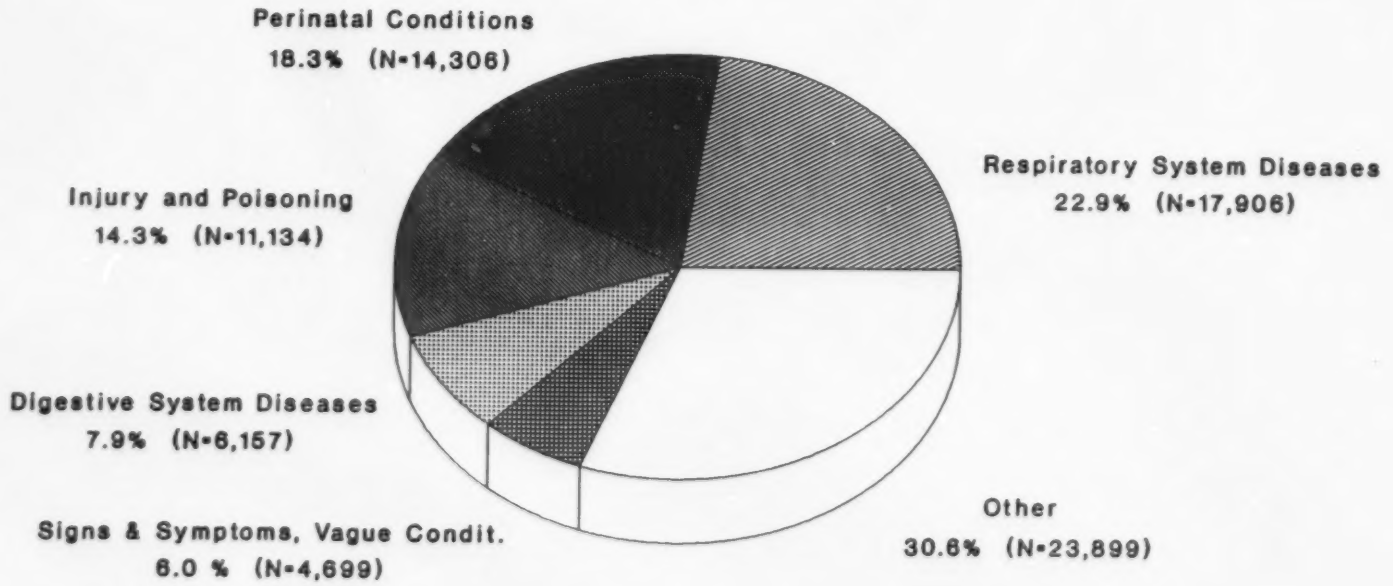
As a result, recognition of the limitations of current profiles and data banks needs to be made. Morbidity data is traditionally collected as hospitalization data and has its shortcomings. Hospitalization data is recorded for occurances only and does not differentiate re-hospitalizations for the same individual. As a result the number of cases may provide an over-estimation of the individuals affected by various illnesses. Hospital data is limited in that it does not not reflect visits to physicians, emergency rooms or other health service utilization. Without this data and other measures of health, the full extent of risks to children are unknown.

1987

Six Leading Causes of Hospitalization in B.C.

Age Group: 0-19 Years Old

Total Number of Cases = 78,101



Source: Hospital Programs, 1987 (derived from Health Planning Database).

FIGURE 3

"While few would deny the importance of mortality and morbidity as health indicators, there is more to health than death and hospitalization" (23). The health status of children is not easy to determine as there are a multitude of factors in the physical and social environment that contribute to one's health. Family income, parental education, minority status, child care arrangements, community and social supports all can affect health and these are not reflected in traditional data sets.

Many sources of data exist and information can be inferred from standardized physical examinations. Records of hospital discharges and registers of chronic disease and handicapping conditions are also good sources of information, but all these sources have limitations. The groups studied are usually not representative of the general population and adjustments may be required before the results may be applied to the remainder of the child population. Interview surveys have also proven useful, but again have their pitfalls as they often rely on recall and the data retrieved is questionable in its reliability.

Variations in coding and the quality of data within the province as well as between provinces and nations creates problems when comparing health data. A lack of national standards also makes it difficult to evaluate the meaningfulness of data collected.

For the purposes of this report data were collected that reflect hospitalization rates and mortality in British Columbia for each of four age groups in childhood. The major causes of death and hospitalization in each age group in British Columbia are outlined in the text. Further refinement of the data may prove beneficial as the data presented does not reflect a breakdown of the major causes (eg. Injury and Poisoning does not indicate the specific cause of the injury and whether it is by motor vehicle, falls, drowning, burns etc). In addition regional data is available by health unit and would provide a more sensitive indicator of risk as well as service need.

Regional data was not reviewed for this report, but would provide the Ministry with more in-depth analysis and understanding of the health status of children and youth across the province.

There is a need for health professionals and government policy makers to determine what are the best indicators of children's health. This document attempts to look at traditional morbidity and mortality data for children in British Columbia, as well as identify gaps in our knowledge in relation to other determinants of health. The challenge exists for health professionals and epidemiologists to identify indicators that reflect the 'health'status of children and which do not limit our understanding to "ill-health".

4.4 REGIONAL VARIATION IN HEALTH STATUS

In reviewing health data on children in British Columbia, it is evident that regional variation in health status exists within the province. The Child Health Profile project, the CICH Profile and the Social Planning and Review Council have documented variations in morbidity, mortality and health service utilization rates between regions in the province as well as variations between provinces.

National surveys are often utilized to report provincial data and do not always have samples large enough to reflect intraprovincial variations.

If health promotion programs are to be targetted to groups with special needs, then they must also take into account local conditions and different cultural practices and circumstances.

4.5 CHANGES IN FAMILY STRUCTURE

"The family remains the most immediate context for every individual and the health of the family is the major contributor to the health of the individual". (24) Raising children is one of the most demanding obligations that any citizen will have to face economically, mentally, legally and spiritually and the family plays an important role in prevention and health. Families have the potential to influence lifestyle patterns which are conducive to life-long health.

British Columbia has the highest divorce rates in Canada with 33% of marriages ending in divorce. Remarriage rates for the province have increased dramatically over the past 4 decades. The province also has the highest provincial number of common-law relationships in the country. The fertility rate has been below the population replacement level of 2.1 since 1973 and currently stands at 1.7 in British Columbia and Canada. This represents a fall from 3.9 in 1960. Family size is declining and there is an increase in the number of women not having children in the province as well as an increase in the number of couples choosing to have children later in life. An increasing number of women are choosing to have children out of the 'normal' context of a family and the percentage of lone-parent families has increased to 1 in 5. The majority of lone parent families in British Columbia are headed by women and represent 82% of all families headed by one parent. Over half of the households with women as head of the household are living below the poverty line and there has been an increase in the number of children at home without child care.(25)

These facts and the changing nature of 'family structure' impact on the physical and emotional health of children, youth and parents in British Columbia. What is known is that children in British Columbia report less positive relationships with their parents when compared with same aged peers in other provinces. Adolescents report that their parents expect too much of them, they have more arguments with their parents and they have the least happy home life in Canada.(26) In addition incidents of family violence are known to occur in our province and many children suffer from dysfunctional family relationships. These findings are of concern to health planners and more information regarding changes in family structure and its impact on the health of children and youth is needed for health planning and programming.

4.6 DEVELOPMENTAL PROCESS

The consequences and health needs of children depend on their growth and their risks of death and morbidity vary with each stage of physical and emotional development. Profiles of children's health normally analyze health status for each stage of growth and are reported as follows:

AGE	STAGE OF GROWTH & DEVELOPMENT
Birth to 1 year:	INFANCY
1 - 4 years:	PRE-SCHOOL/TODDLER
5 - 14 years:	SCHOOL AGE
15 - 19 years:	ADOLESCENCE

Gender differences in mortality and morbidity do not vary greatly except during the time of adolescence. In the case of adolescence data is often presented separately for males and females.

Major differences in morbidity (hospitalization), mortality and health status, by age and stage of development for children and youth living in British Columbia are presented in Section 5.0. Gender differences will only be presented for adolescent hospitalization data.

5.0 AGE SPECIFIC DEVELOPMENTAL ISSUES

This Section of the paper will highlight health issues that are specific to the 4 major stages of growth and development in childhood. An attempt has been made to highlight the major issues that impact on children's health in each stage rather than to outline all of the factors that determine health status.

5.1 INFANCY: Birth to 1 year

The health of children in infancy is dependent on the time prior to birth and until infants reach the age of 1 year. For the majority of women and families in British Columbia, pregnancy is a healthy time and results in a healthy baby. 98% of babies go home from hospital healthy and the majority of births are without complications (59%).(27) Despite the fact that pregnancy is a normal physiological experience, there is increasing concern about the over-medicalization of pregnancy and childbirth. Caesarean section rates in the province have increased and regional variations in caesarean delivery rates exist.

Traditionally death and disease data in newborns have been used as crude indicators of the health of children, but other indices of infant welfare need to be considered as social and human factors are complex and have a far reaching impact on pregnancy, birth and infancy.

Infant Mortality Rate (IMR) includes all deaths within the first year of life and is often used as an indicator of the well-being of children in society. There has been a steady decline in deaths in the first year of life in British Columbia and Canada due to a combination of biological, environmental, socioeconomic and health care factors. Currently the IMR in British Columbia equals that of the national average with 8 deaths per every 1,000 live births in British Columbia.(28)

Figure 4 reflects the leading causes of death in British Columbia in 1987 for the child population under one year of age. One can see that perinatal conditions and congenital anomalies contribute to 65% of all deaths in this age group.

Perinatal health is thought to be largely determined by two variables, those being socioeconomic status of the community and the availability of health professionals (29). These variables contribute to regional differences in mortality rates (higher in peri-urban and northern areas), and higher rates in different population groups including the Native and poor.(30)

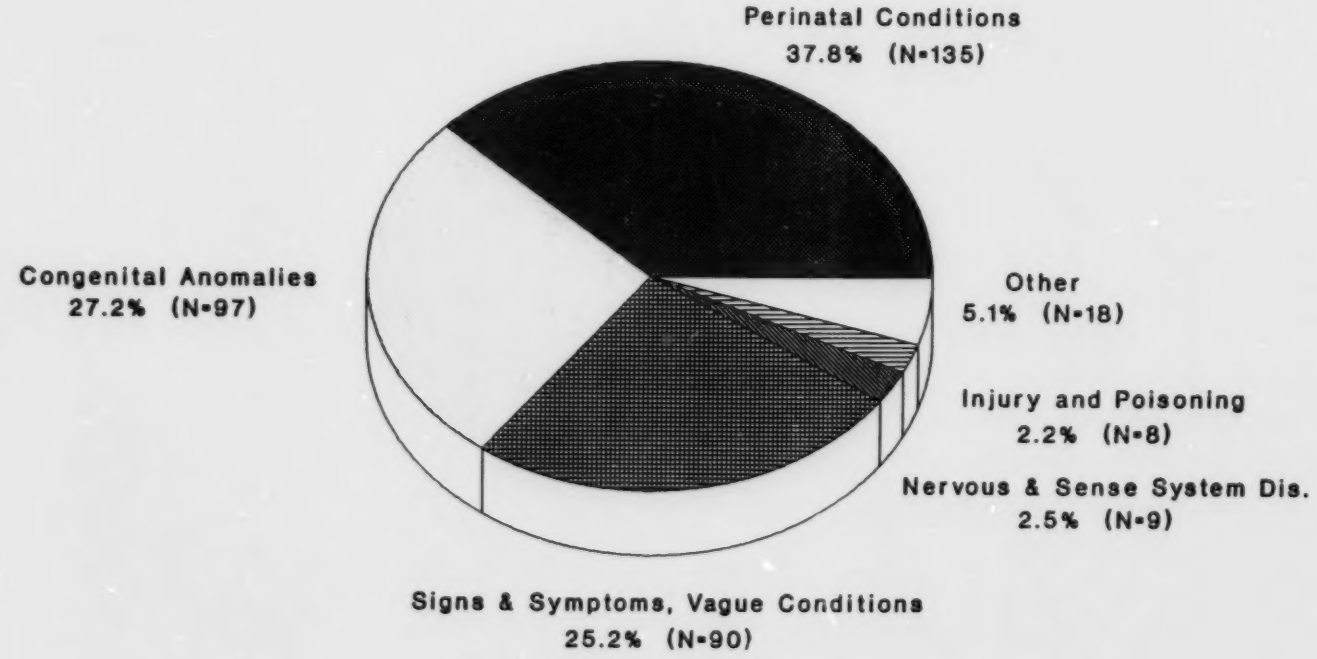
5.1.1 LOW BIRTH WEIGHT:

The real challenge which impacts on health in infancy is the prevention of low birth weight babies. "Being born at an appropriate gestational age (37 to less than 42 completed weeks) and an appropriate weight (3000- 4000 gms) is a far more powerful determinant of perinatal survival than is the sophistication or availability of the medical support services" (31). Not all children are born with the same chance of survival as prematurity and low birth weight are highly correlated with perinatal death and handicap.

FIGURE 4

1987
Six Leading Causes of Death in B.C.

Age Group Under 1 Year Old
Total Deaths = 357



Source: Division of Vital Statistics, 1987 (derived from Health Planning Database).

Five percent of all births in 1988 in British Columbia were low birth weight (2500 gms) (see Table 3.) and 1 % were very low birth weight (1500 gms). Although birth weight in general has increased over the past few decades, the percentage of low birth weight babies has remained relatively stable for the past decade. There is a lack of specific data as to who the low birth weight babies are and the conditions that they are born into. Many factors contribute to low birth weight and exact causes are difficult to determine. Lists of risk factors include maternal malnutrition, inadequate prenatal care, unfavorable socioeconomic conditions, multiple pregnancies, excessive smoking, alcohol, drugs, age of mother, maternal education and emotional disturbances. Teenagers in British Columbia are at significantly greater risk (18-21% higher rates) for delivery of low birth weight babies as data in Table 4 demonstrate. Low birth weights are also known to vary by health area or region of the province. Data here indicate that future programs aimed at the prevention of low birth weight infants in British Columbia need to be targetted at high risk groups including pregnant teenagers and women of child bearing age who are living in regions of the province with higher LBW rates.

Low birth weight and prematurity both result in higher costs to the health care system as some of these infants require expensive intensive care, parenteral nutrition, ventilator assisted breathing and other special services. Although the survival rates of low birth weight babies have increased, the number of these children that are free from handicap and disability is not known.

Further research needs to be carried out to determine protective factors which prevent low birth weight. Research results from a recent study in Ontario found statistically significant correlations between birth weight, maternal smoking and support from the mother's family. This study also found that depressive symptomatology was less in teenage mothers who were living with their parents. The results of the study indicate that 'social support' of teenage pregnancies would benefit both mothers and their infants. (32)

5.1.2 SUDDEN INFANT DEATH SYNDROME:

The Child Health Profile project found that the leading cause of death in children after one month of age is Sudden Infant Death Syndrome (SIDS), followed by birth defects. Two thirds of non-hospital post- neonatal deaths are due to crib deaths and infants at higher risk include those of; low birth weight, first time mothers, multiple births, women with 4 or more children and Native women (33, 34). Preventive programs aimed at those groups at high risk for SIDS should be supported by the Ministry of Health.

TABLE 3

Low Birthweight Rates (< 2,500 g) Per Total Live Births in B.C.

Year	%	Number per total live births
1971	6.9	2401/34,968 (1)
1981	5.1	2112/41,679 (1)
1985	4.9	2115/43,282 (2)
1986	4.7	1998/42,165 (2)
1987	5.1	2142/41,595 (2)
1988	5.0	2170/42,732 (2)

Sources:

1. Tonkin R. and Sheps S. Perspectives on neonatal mortality and changes in perinatal care in B.C. B.C. Medical Journal 1985; 27:78-83.

2. Division of Vital Statistics 15/1/90.

TABLE 4

Teenage Pregnancy & Low Birth Weight

British Columbia
1987 & 1988

Total Live Births 1987: 41,595
Total Live Births 1988: 42,732

Year	Mother's Age	Birth Weight (<2,500 g) # cases	# Live Births	% LBW
1987	< 20 yrs	133	2,195	6.1%
	=> 20 yrs	1,976	39,400	5.02%
1988	< 20 yrs	138	2,378	5.8%
	=> 20 yrs	1,985	40,354	4.92%

Source: Division of Vital Statistics, March 1990.

5.1.3 HOSPITALIZATIONS:

Hospitalization rates in infancy are the highest in childhood with approximately 30% of all children admitted to hospital by one year of age. Hospitalization rates increase after one month of age and regional variations in these rates occur. Figure 5. reflects the leading causes of hospitalization in 1987 for the under 1 year population and include; perinatal conditions (61.5%), respiratory system diseases (11.5%), 'all other' causes (9.5%), congenital anomalies (8.3%), vague conditions, signs and symptoms (4.7%) and digestive system diseases (4.5%). Programs targetted at the prevention of low birth weight infants and prematurity would contribute to a reduction in infant hospitalization rates.

5.1.4 NUTRITION:

The benefits of breastfeeding during the first 6 months of life have been well documented and include enhanced emotional, physical and immunological health in infants with positive maternal effects as well. In British Columbia over 80% of mothers breastfeed their babies and this is well above the national average of 68% (35).

5.1.5 CHILD SAFETY:

British Columbia has had mandatory seatbelt and car restraint legislation since 1985. The Canada Health Promotion Survey found that 92.3% of drivers in British Columbia report they insist children use seatbelts (36). Despite this finding actual car restraint use in British Columbia has only been found to be about 50%. (37)

This is an area where increased compliance would result in improved health for children and adults alike.

5.1.6 IMMUNIZATION:

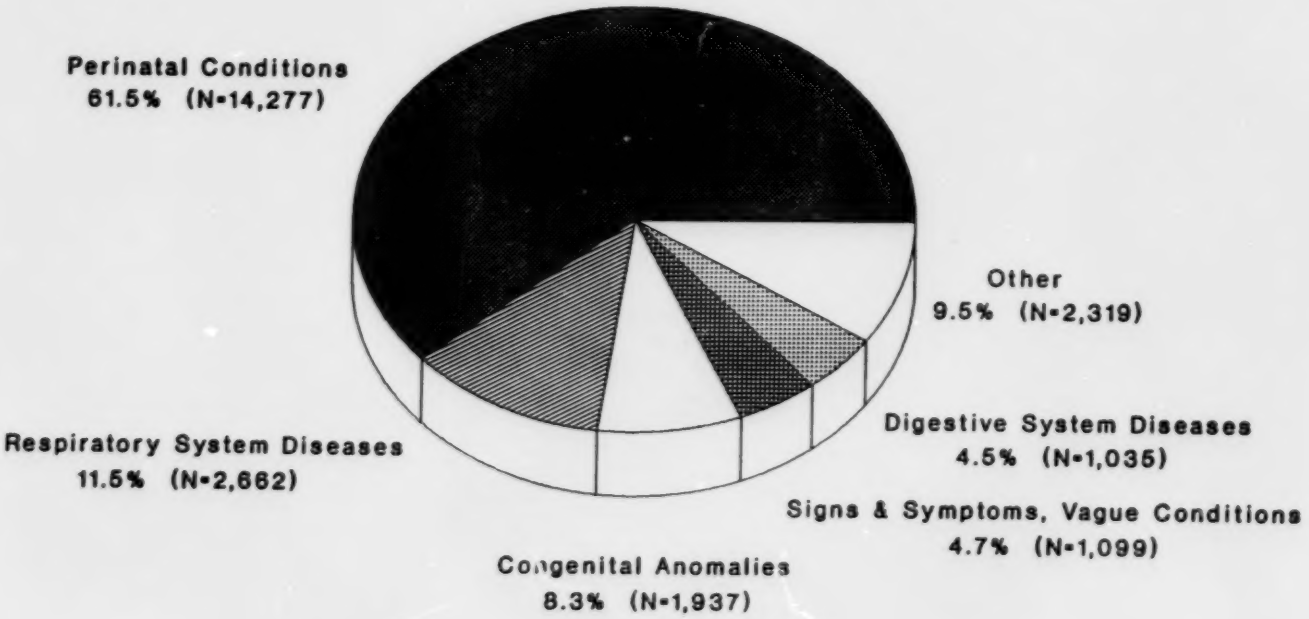
Immunization remains the most effective way of protecting children from infectious diseases. Data on the immunization status of infants and pre-school children is routinely collected in British Columbia, and provincial reports indicate that at school entry 95-99% of children in the province have up to date immunization. Provincial immunization rates are comparable to the national average (38).

FIGURE 5

1987
Six Leading Causes of Hospitalization in B.C.

Age Group Under 1 Year Old
Total Number of Cases = 23,329*

*(excludes live healthy births)



Source: Hospital Programs, 1987 (derived from Health Planning Database).

5.1.7 SMOKING AND PREGNANCY:

In the Canada Health Promotion Survey British Columbia showed the least number of regular smokers in the whole of Canada. Data indicate that health promotion strategies in the area of smoking are having an impact. In women who fall into child-bearing ages (15-44), 24% reportably are smokers. (39) What is not known is the number of pregnant women in this age group that smoke and continue to smoke throughout pregnancy. The relationship between maternal smoking and LBW is well established and further research is needed to determine the most successful smoking cessation programs for pregnant women.

5.1.8 AIDS:

In 1989, 41 children in Canada under the age of 15 years had been diagnosed with acquired immunodeficiency syndrome. Thirty five of these 41 cases or 85% were acquired through perinatal transmission (40). This is an area of increasing concern for health care providers and education and prevention strategies that are targetted at high risk populations need to be supported.

Infancy is a period of high risk for the well being of new born children and their families. Strategies aimed at improving health during infancy are best aimed at future parents and those at greatest risk for low birth weight and premature births. Program needs include strategies to improve accessibility to health care services, early recognition of illness in pregnancy and infancy, assistance to pregnant women where smoking prevalence is high, screening programs for birth defects, prevention and recognition of high risk pregnancies including fetal alcohol syndrome and drug dependent mothers, genetic counselling and improved surveillance during labor. Two areas that deserve further investigation focus on enhancing parenting skills and recognition of the importance of family and social supports in preventing morbidity and mortality in infancy.

5.2 PRE-SCHOOL/TODDLERS: 1-4 years

As the risk from events surrounding birth diminish the young child develops increased independence by walking, running, exploration and skill acquisition. Increases in language skills allow the development of interpersonal relationships and children develop a sense of security and self esteem. Increased gross motor skills allow toddlers greater access to their environment and with it comes an increased vulnerability.

There has been a decline in death and hospitalization rates for this age group since 1970 and a shift in the causes of death away from infectious diseases to those which can be attributed to social causes. The most noticeable decrease in mortality has been in deaths due to respiratory illnesses (41). A major concern is that deaths due to injuries have not declined and thus comprise a major health threat to pre-school children.

Figure 6 indicates that injury and poisoning constitute 46.6% of all deaths in pre-school children in British Columbia, followed by congenital anomalies (19.2%), 'all other' causes (12.4%), vague conditions, signs and symptoms (8.2%), respiratory system diseases (6.8%) and neoplasms (6.8%). The causes of injury mortality are diverse, but the major causes of death in Canada in the pre-school population have been found to be due to MVA's of which 50% are in child pedestrians. Other causes of injury include falls, poisoning, burns and drowning (42).

The major illnesses that contribute to hospitalization in this age group in British Columbia are found in Figure 7. and indicate that 43.6% of all hospitalizations are due to diseases affecting the respiratory system. Canadian data reflect the same finding and indicate that these diseases are due to acute upper respiratory infections, diseases of the tonsils and adenoids, asthma and pneumonia (43). Variations in illness rates between regions of the province are suspected, but the data reflecting this has not been reviewed. Other leading causes of hospitalization in the pre-school population include 'all other' causes (20.2%), injury and poisoning (12.3%), digestive system diseases (8.9%), vague conditions, signs and symptoms (8.9%) and infectious and parasitic diseases (6.7%).

5.2.1 INJURY AND POISONING:

What is most evident in this age group is the susceptibility of pre- school children to injuries from the environment. A lack of awareness and inability to judge danger from speeding cars, deep water, matches, medicines and other poisonous substances enhance their risk of harm. Injuries and poisoning comprise the major health concern in this age group. Health promotion strategies that focus on child safety issues have the potential to positively impact on the health of pre-school children.

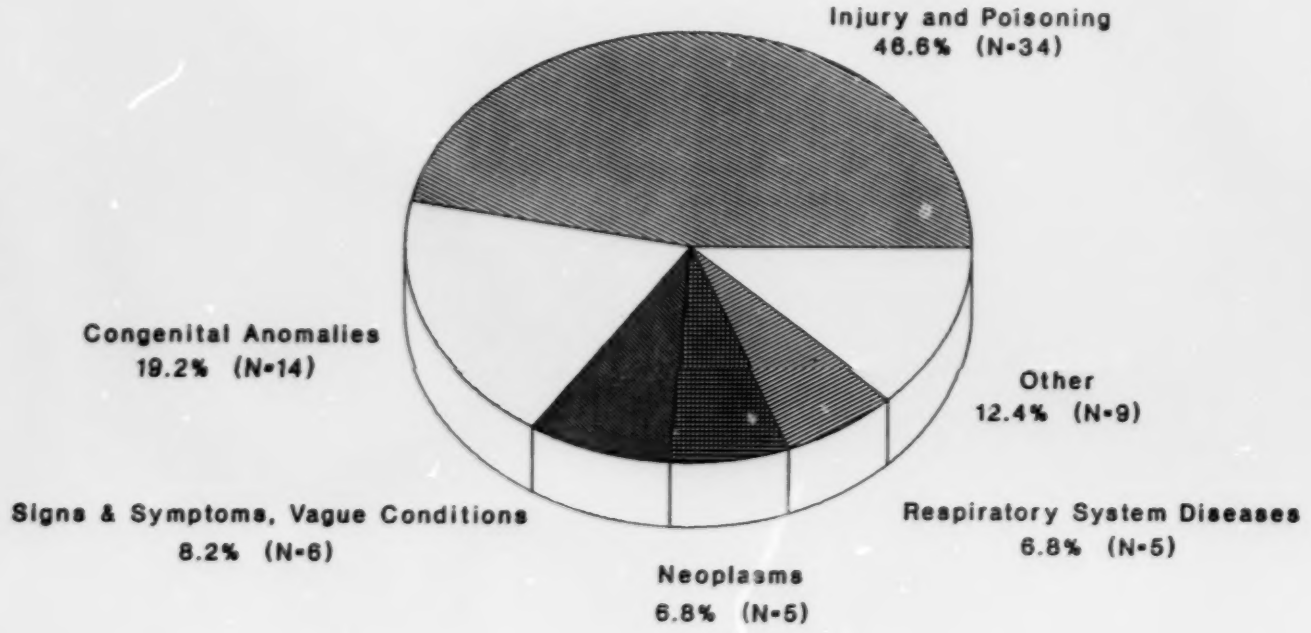
5.2.2 RESPIRATORY ILLNESSES:

Respiratory illnesses still constitute a significant health risk for children and further research is needed to determine causes of ill- health, regional variation and high risk groups. Effective health promotion strategies may then be launched with these factors in mind.

1987

Six Leading Causes of Death in B.C.

Age Group 1-4 Years Old
Total Deaths = 73



Source: Division of Vital Statistics, 1987 (derived from Health Planning Database).

FIGURE 6

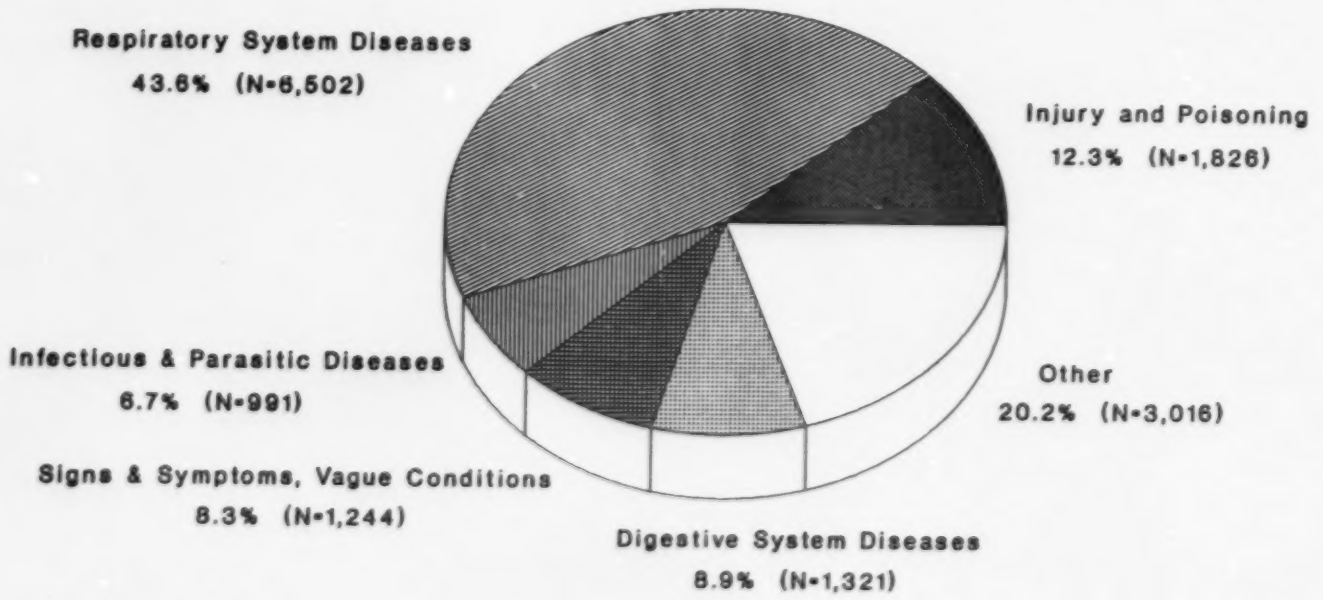
FIGURE 7

1987

Six Leading Causes of Hospitalization in B.C.

Age Group 1-4 Years Old

Total Number of Cases = 14,900



Source: Hospital Programs, 1987 (derived from Health Planning Database).

The risk of illness from second hand smoke has been demonstrated in both adults and children and smoking cessation programs targetted at adults may result in a reduced incidence of respiratory illnesses in children.

5.2.3 IMMUNIZATION:

British Columbia has a public funded immunization system for diptheria, whooping cough, tetanus, polio, red measles, mumps and rubella and immunization rates have reached 95-99% of all school age children in the province. (44) These rates are comparable to Canadian immunization rates and the success of immunization programs has served to illustrate the beneficial impact of promotive health strategies in childhood.

5.2.4 NUTRITION:

The nutrition status of children has not been well assessed since the Nutrition Canada Survey of 1972. At that time adequate nutrition in pre- schoolers was identified as having long term consequences for dental health and for growth and development. The Nutrition Canada Survey did discover that almost 50% of the diets of pre-schoolers were deficient in iron and 20% had below the recommended standard intake of calcium and vitamin D. (45) More current data is needed in order to assess the adequacy of children's diets and dental health in British Columbia today.

During the pre-school period children are increasingly more vulnerable to injury from the environment. Strategies aimed at improved health for pre-school children are best targetted at parents, other care providers (foster parents, day care and pre-school teachers) and the community at large. Injury prevention programs that emphasize; safer roads, sidewalks and crosswalks, enforced speed limits, pedestrian safety programs, community commitment to safer streets for preschool and school aged children, enforcement of child car restraints, the use of bicycle helmets, enforced regulation of safe consumer products, safe and accessible housing and play areas, safe dispensation of medications, self-extinguishing cigarettes, safe public spaces, education of parents/care providers and adequate child care facilities are all required.

Smoking cessation programs and enforced legislation of pollution controls need to continually be supported in order to reduce the risk of respiratory illnesses in children.

5.3 SCHOOL AGE CHILDREN: 5-14 years

Children in British Columbia aged 5-14 years comprise the largest proportion or 48.4% of the child population. School-aged children are relatively healthy and free from hospitalizations and premature death compared to other age groups.

Despite this being the healthiest time of childhood it is also a time when other forms of ill-health begin to manifest themselves. As children experience increased independence and autonomy through friends, school and community groups, they expose themselves to increased risk from injury. Concerns about emotional well being also arise in this age group.

Although death rates have gradually declined since 1970 the current rate in British Columbia is comparable to that of Canada and is 24/100,000. (46) Compared to other countries Canada's death rate in childhood still ranks higher than that of Australia, England, Germany and Sweden. Among the developed countries only France and the U.S.A have higher death rates in this age group.

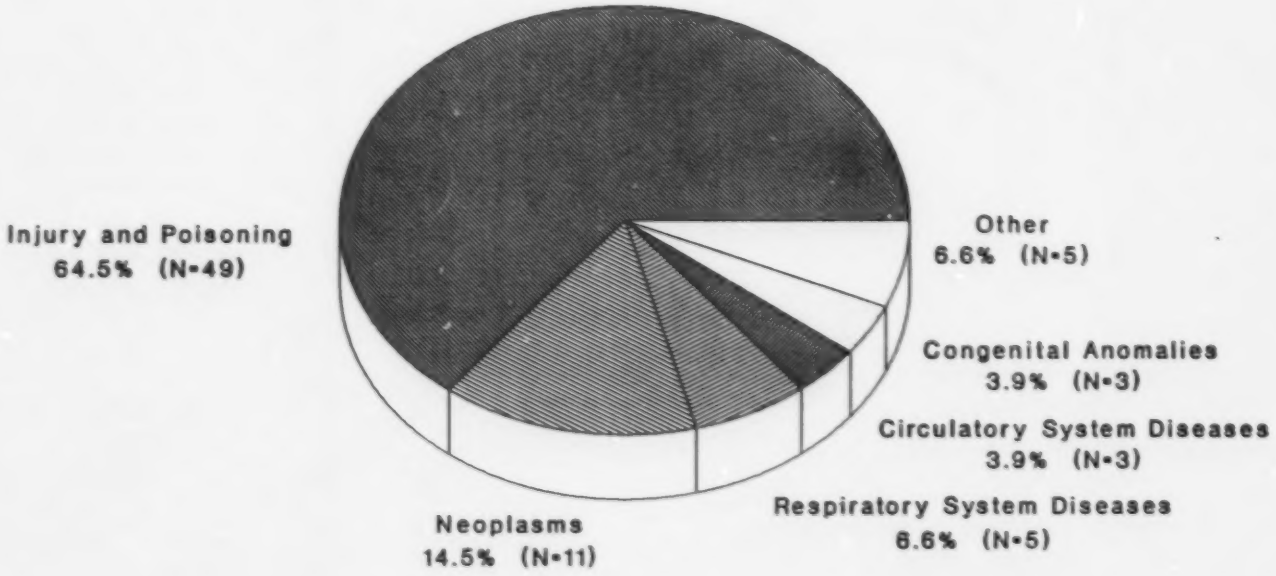
5.3.1 INJURY & POISONING & RESPIRATORY SYSTEM DISEASES

Figure 8 indicates the leading causes of death in British Columbia in the child population aged 5-14 years. The highest number of potential years of life lost are due to deaths from injuries and poisoning (64.5%). Injuries constitute the greatest risk to school age children and the number of deaths resulting from injury is higher than the combined number of deaths from cancer, circulatory diseases, infectious diseases, congenital anomalies and diseases of the nervous and circulatory systems combined. (47) Canadian data indicate that the majority of these are due to motor vehicle accidents (54%) (48), but mortality from bicycle accidents is also known to be highest in school aged children. Other causes of death in this age group include neoplasms (14.5%), respiratory system diseases (6.6%), 'all other' causes (6.6%), congenital anomalies and circulatory system diseases (3.9% each).

1987

Six Leading Causes of Death in B.C.

Age Group 5-14 Years Old
Total Deaths = 76



Source: Division of Vital Statistics, 1987 (derived from Health Planning Database).

FIGURE 8

There has been a decline in hospitalization rates for school aged children in Canada since 1970, but these rates have now stabilized. Regional and provincial variations in hospitalization occur and it has been estimated that 1 out of every 20 children aged 5-14 will be hospitalized in Canada (49). Figure 9. indicates the leading causes of hospitalizations for ages 5-14 in British Columbia. Respiratory system diseases comprise the majority of hospital cases (31.9%) in this age group in British Columbia and in Canada. Canadian data also indicate that half of these cases are due to diseases of the tonsils and adenoids followed by asthma and upper respiratory tract infections. All other causes of hospitalization comprise 26.1% of hospital cases followed by injury and poisonings which constitute 22.4% of cases in British Columbia. Canadian data indicate that the majority of injury cases are due to falls (35%) and motor vehicle accidents (13%).(50). In this report data for British Columbia has not been broken down by cause, but injuries and poisonings constitute major risks to school aged children that are largely preventable. Other causes of hospitalization for children aged 5-14 in British Columbia include digestive system diseases (9.2%), conditions with vague signs and symptoms (6.3%) and nervous and sensory system diseases (4.1%).

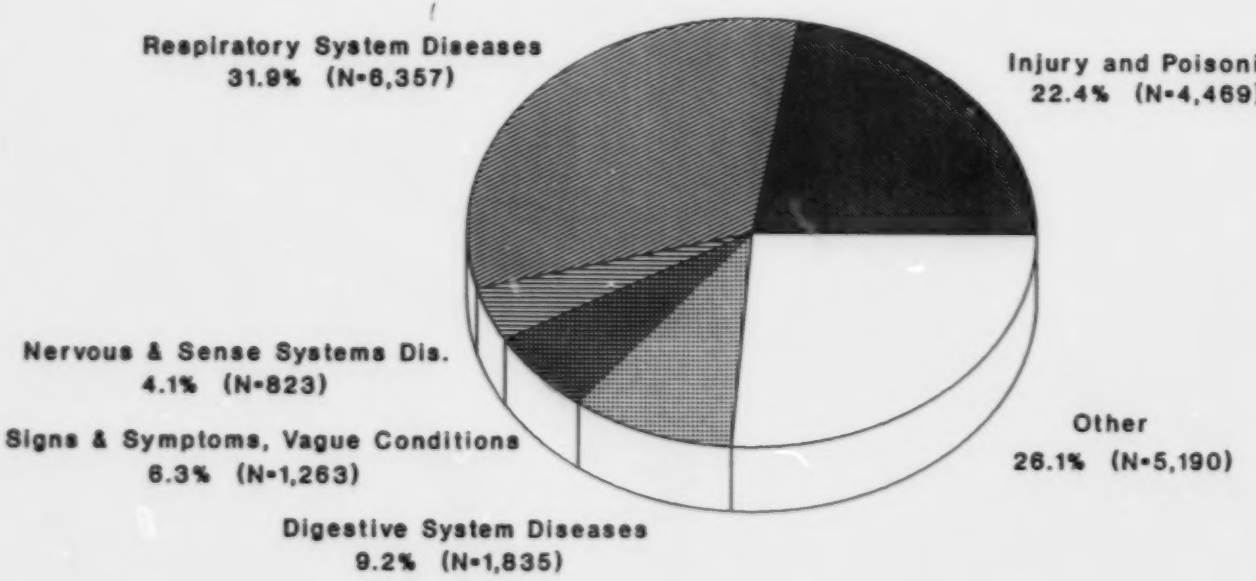
5.3.2 EMOTIONAL WELL-BEING/MENTAL HEALTH:

The development of emotional well-being is an evolving health issue for school aged children in British Columbia. It is difficult to estimate the extent of mental health problems in childhood as they include a broad range of maladaptive behaviours. The reckless use of firearms, misuse of water craft, swimming, skiing and climbing in unsafe areas, acting out against persons, property and institutions, quitting school, running away from home, vandalism and arson all constitute 'health' and economic concerns for school aged children and for British Columbia society in general. The cost to property damage is estimated to be in the millions of dollars and the cost to productivity is unknown. (51)

Prevalence rates for conduct disorder and other behavioural problems in childhood are not known for British Columbia and data concerning mental health status are not found in traditional morbidity and mortality data sets. Data from the Ontario Child Health Study (52) indicates that gender variation exists in psychiatric disorders with disorders affecting 1 in 5 males and 1 in 7 females aged 4-16 years. Higher rates of conduct disorder and hyperactivity have been found in boys and girls are at higher risk for emotional disorders. Prevalence rates for children in British Columbia are not known, but it could be speculated that rates are similar to those found in Ontario.

1987
Six Leading Causes of Hospitalization in B.C.

Age Group 5-14 Years Old
Total Number of Cases = 19,937



Source: Hospital Programs, 1987 (derived from Health Planning Database).

FIGURE 9

What is known is that on reports of mental health and self esteem, children in British Columbia report less confidence in themselves, more difficulties in sleeping because of worry, higher rates of depression and increased awareness and concern with body image and weight than other children in Canada (53). These results are disturbing and indicate need for further research in the area of emotional well-being including maladaptive behaviours such as alcohol and drug use, eating disorders, delinquency and suicide.

5.3.3 SUBSTANCE USE:

Traditionally parents and society in general have voiced concern about the use and abuse of drugs and alcohol in school aged children. Although data is available to indicate utilization patterns in children, what is not known is the extent of the harmful affects that these drugs have on behaviour and illness. The relationship between drinking and driving and the risk of cigarette smoking to long term health is known. Extensive prevention campaigns in these areas have been successful in raising public awareness of these health risks and have resulted in behaviour change. In a national survey on Health Attitudes and Behaviours in children, statistics indicate that children in the province had the second lowest percentage of young people smoking when compared to rates found in other provinces and smoking rates are lower than the national average (see Table 5). Smoking cessation programs and health policy supporting reductions in smoking need to be strongly enforced.

5.3.4 PHYSICAL ACTIVITY:

The relationship between health and physical activity has been well documented and surveys of children in British Columbia indicate that 1 in 10 children aged 10-13 are sedentary (ie. spend less than 3 hours a week in physical activity outside of school programs). (54) Despite this finding, children in grades 4-7 in British Columbia have the highest proportion of children taking part in daily physical education classes in Canada. The value of setting lifestyle activity patterns during this age group is essential to the long term health of children. The Ministry of Health needs to support the implementation of physical education programs in the school system that support lifelong activity patterns.

TABLE 5

School Age & Adolescent Smoking, Drinking & Drug Behaviours in B.C. and Canada
1984-85

	B.C.	Canada
1) % of respondents that smoke:		
Grade 7 students:	8.5%	11.0%
Grade 10 students:	22.2%	26.3%
2) % of respondents that drink alcohol:		
Grade 7 students:		
drink 1/month	16.6%	14.5%
drink 2-3 x/wk.	1.6%	2.5%
Grade 10 students:		
drink between 1/wk. & 2-3 x/wk.	28.0%	32.0%
drink at least 2-3 x/wk.	12.3%	10.2%
3) % of respondents that use cannabis:		
Students that smoke cannabis at least 2-3 x/wk.:	8.2%	5.5%

Source: King, A.J.C., Robertson, A.S., Warren, W.K. Canada Health Attitudes and Behaviour Survey. 9, 12 and 15 year olds, 1984-85. Kingston. Social Program Evaluation Group, Queen's University and Health & Welfare, Canada. 1985.

5.3.5 SEXUALITY:

Issues of concern in this age group begin to overlap with concerns of adolescence and the struggle for increased independence and maturity. Sexual awareness is a natural outgrowth of maturation and studies indicate that by age 14, 31% of males and 21% of females in British Columbia have had sexual intercourse at least once.(55) It is essential that those children choosing to be sexually active are well informed and learn to take responsibility for their reproductive health.

5.3.6 FAMILY VIOLENCE:

Family violence affects all members of the family and includes offenses such as neglect, assault, mental, emotional and sexual abuse. The precise extent of family violence is unknown despite recognition that physical abuse in children and adolescence is a significant problem. The only comprehensive study of abuse in Canadian children was conducted in 1983 (56) and 1 in 3 children reported they were victims of sexual abuse by the age of 15 years. (see Table 6).

Children are often the 'silent victims' and few seek assistance for abusive behaviour. A lack of services exists for traumatized youth and few acts come to the attention of health care providers. The British Columbia Child Health Profile project indicated that if the full extent of the problem were to surface, it might challenge the existing service structure. What is known is that the 'silent victims' tend to resurface in the care system later in life. Victims become the abusers and the cycle of violence often repeats itself (57). The long term impact of abuse is not known and there is a need for increased awareness, sensitivity and understanding concerning the origins of abusive behaviour. Effective interventions need to be implemented before this behaviour takes place.

5.3.7 FAMILY DYSFUNCTION:

Changes in family structure in British Columbia have been outlined in Section 4.5. What is known is that health problems in childhood can often be attributed to problems related to family dysfunction. The full extent of these problems is not known, but many issues affecting the emotional well-being of children may be related to family discord. In addition maladaptive behaviours in children and adults including delinquency, emotional and eating disorders, child abuse, exploitation, and sexual abuse are related to family relations and are known to affect the health of children. Further research in the area of family discord is necessary in order to determine the most appropriate preventive programs.

TABLE 6

Victims of Sexual Assault

By Age of Victim in Canada 1983

Age	Female %	Male %
Under Age 7	9.2	11.9
7-11 yrs	29.4	27.1
12-13 yrs	24.8	25.4
14-15 yrs	36.6	35.6

Source: Report of the Committee on Sexual Offenses Against Children and Youths. Vol. 1. Minister of Supply & Services. Ottawa, 1984. (Badgley Report).

Although children are relatively free from injury and illness during their school years, this time represents the greatest potential for children to develop health enhancing habits early in life. Strategies aimed at improving health for school-aged children should maximize the potential of the school system to impact on children and their families. The Ministry of Health should continue to support and assist in the development of school health education programs that focus on safety and injury prevention, substance abuse and prevention, child abuse, family life, mental well-being, active living, education and career development.

Program needs include community initiatives for safe roads, pedestrian and bicycle safety (including bicycle helmets) and provision of safe recreation areas. Enforcement of government legislation regarding cigarette and alcohol sales, speed limits, the use of seatbelts, drinking and driving and the regulation of safe consumer products is needed. Creative 'family centred' prevention programs should also be encouraged and supported.

5.4 ADOLESCENCE: 15-19 years

Adolescence is characterized by the onset of puberty and children vary in the age in which they enter this stage of their development. As children evolve from childhood to adulthood, their lives are increasingly more complex as they seek independence and make choices that will affect future lifestyles. "By its very nature the adolescent and young adult lifestyle involves challenging authority, testing personal and social limits, and experimenting with adult-type behaviours". (58) Many of the health problems of youth are behavioural and stem from a natural desire to experiment and take risks. Increased availability of tobacco, alcohol and drugs together with inadequate information and supporting services may result in inappropriate choices and some with disastrous consequences. (59)

Health concerns during adolescence include a broad range of issues reflecting a time of emotional turmoil and concern with academic failure, sexuality, teenage pregnancy and parenthood and family dysfunction. Increases in vandalism, running away from home and eating disorders are all symptoms of a young person in crisis. For many the transition to adulthood is very traumatic and can lead to increased risks for health problems and for some, death.

Figure 10 demonstrates that in British Columbia, adolescent mortality rates increase to the highest level since infancy. Unlike the declines in death rates seen in other stages of childhood, there has been a less dramatic decline in the adolescent years. (60) The leading causes of death in British Columbia adolescents are reflected in Figure 11. As one can see the major cause of death in adolescents in British Columbia can be attributed to injury and poisoning (79%). Canadian data indicate that motor vehicle accidents (57%) and suicide (21%) constitute the major causes of death in this age group. Further review of the British Columbia data needs to be carried out to address the major contributing factors in this province. Other major causes of death in adolescence can be attributed to 'all other' causes (6.6%), neoplasms (6.1%), nervous and sensory system diseases (3.3%), diseases of the circulatory system (2.8%) and vague conditions, signs and symptoms (2.2%).

The Child Health Profile Project identified that British Columbia has a major public health problem in the degree of violence, risk taking and self- destructive behaviours that adolescents exhibit. Behavioural data which allow explanation as to why each death occurs is lacking. Mortality from violence varies with place of residence in the province and young males are seen to be at particular risk.(61) Further research is needed to determine the emotional well-being of adolescents in British Columbia and factors which are protective.

5.4.1 MOTOR VEHICLE INJURIES:

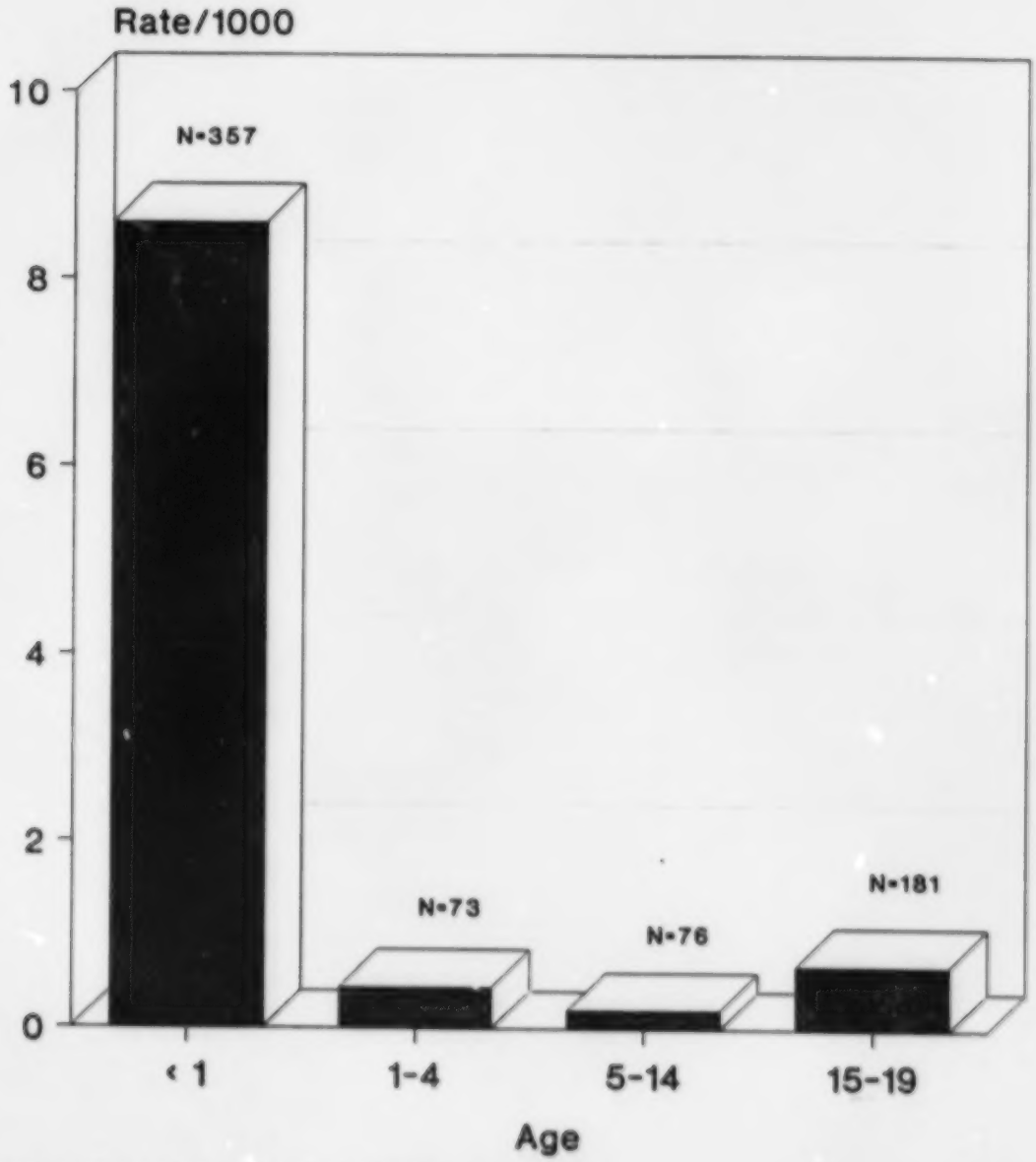
The major contributor to adolescent death and morbidity in recent decades has been the motor vehicle. Motor vehicle accidents usually involve a combination of alcohol, excessive speed and inexperience of the driver. Misuse of the automobile contributes to the majority of deaths in this age group as well as high costs to property damage, and physical and emotional injury. Mortality data only provide the 'tip of the iceberg' in that for every adolescent killed in a motor vehicle accident it is estimated that 60 more are injured.(62) The full extent of the social and economic impact of motor vehicle accidents is not known in British Columbia. With an increase in the number of automobiles and drivers on the road and increases in migration to British Columbia, the risk of injury to all citizens of the province is a major health concern. Mandatory seatbelt legislation has resulted in increased seatbelt use and a decrease in injuries from accidents. Seatbelt use has, however, been found to be lower in young people aged 15-24 years and in drinking drivers.(63)

FIGURE 10

Death Rates All Causes

Age 0-19 Years, British Columbia 1987

Total Deaths = 687

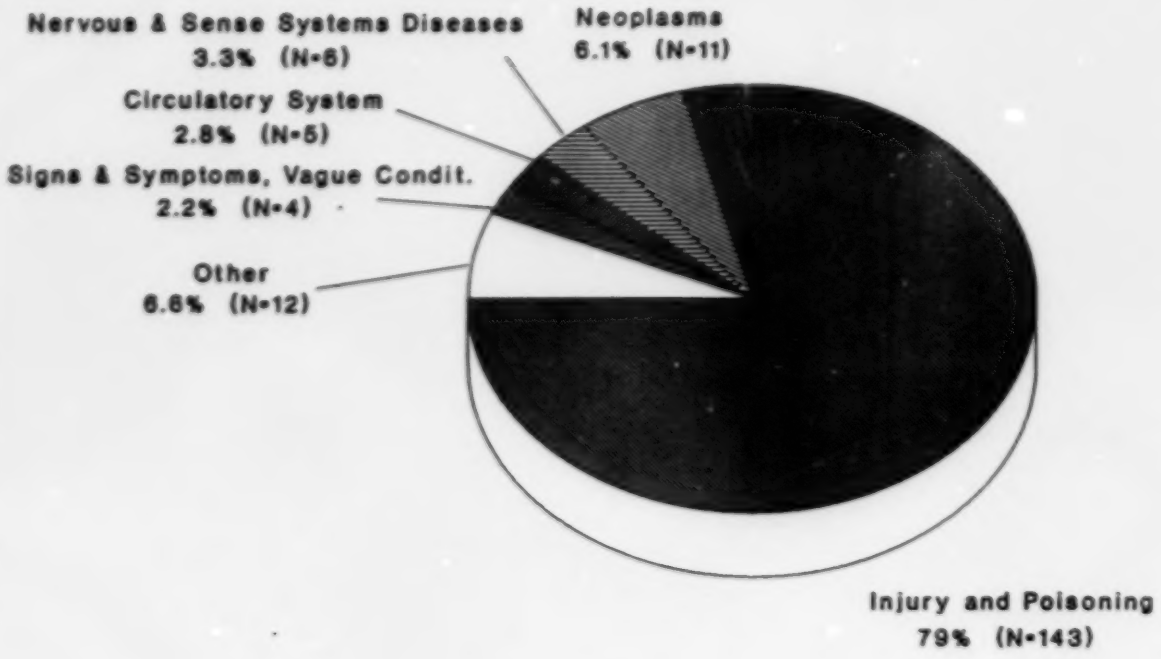


Source: Division of Vital Statistics, 1987
(derived from Health Planning Database).

1987

Six Leading Causes of Death in B.C.

Age group 15-19 Years Old
Number of Deaths = 181



Source: Division of Vital Statistics, 1987 (derived from Health Planning Database).

FIGURE 11

Declines in adolescent mortality occurred in the early 1980's and have been attributed to factors related to the recession and effective programs such as Mother's Against Drinking and Driving (MADD), CounterAttack, the Continuing Committee on Traffic Safety and the ICBC secondary education programs. (64)

Stringent enforcement of seatbelt legislation, speed limits and the CounterAttack programs continue to be required to ensure that injuries from motor vehicle accidents are minimized. No simple solutions exist and further research is needed to address the regional disparity in injury and death rates as well as to identify effective strategies to counter the risk of death and injury from MVA's.

5.4.2 SUICIDE:

The risk of suicides among adolescents in British Columbia is a major health concern and suicide rates have increased almost 60% from 1970-1985. (65) Canadian data indicate that suicides comprise the second major cause of death in adolescence.(66) In Table 7. suicide rates in British Columbia and Canada are shown to vary with gender and young males are at significantly greater risk than females for successful suicide attempts. Regional variations in suicide rates exist and young male Natives and adolescents living in northern areas are at higher risk. Female adolescents in British Columbia have the highest rates of suicide in Canada outside of the N.W.T's. Suicide rates among adolescent males in British Columbia are two times the rate of females (16.7% vs 7.8%) (67).

Males are known to use more violent methods in attempted and successful suicides such as firearms, while females more commonly use less violent and less effective methods such as alcohol and drugs. Mortality data reflect only a small proportion of the health risk to adolescents as it is estimated that for every adolescent who successfully commits suicide, 100-150 others make an attempt. (68) No comprehensive data on the number of adolescents who attempt suicide or have multiple attempts is available in British Columbia. Further research is needed in order to address the risks and antecedents of suicidal behavior in adolescence as well as determine preventive strategies.

TABLE 7

Suicide Rates by Gender
Age Group 15-19 Years Old

Canada and Provinces 1985

	Male	Female	Total
	RATE/100,000		
NFLD	-	-	-
PEI	-	-	-
NS	23.9	2.8	13.6
NB	15.7	-	8.1
QUE	21.7	4.1	13.1
ONT	14.7	2.0	8.5
MAN	27.9	2.4	15.4
SASK	21.6	5.1	13.5
ALTA	22.9	5.5	14.4
BC	16.7	7.8	12.3
YUKON	100.0	-	52.6
NWT	71.4	40.0	56.6
CANADA	18.4	3.6	11.2

- NO SUICIDE

Source: Health and Welfare Canada. Suicide in Canada. Report of the National Task Force on Suicide in Canada, Cat. # H39-107/1987E, Ottawa 1987.

5.4.3 HOSPITALIZATIONS:

Hospital data provide information concerning health risks that adolescents encounter. British Columbia hospitalization rates declined in this age group until 1980 and these rates have now leveled off. Major causes of hospitalization vary with gender and the adolescent hospitalization rate in British Columbia (9/100,000) is comparable to that of Canada (8/100,000). (69)

Figures 12 and 13 reflect the major causes of hospitalization for female and male adolescents in British Columbia. Complications of pregnancy, delivery and puerperium constitute the major cause of hospitalization in females (30.1%), followed by 'all other' causes (28.3%), respiratory system diseases, injury and poisoning (11.7% each), genitourinary system diseases (9.4%) and digestive system diseases (8.8%).

The major cause of hospitalization for male adolescents in the province is due to injury and poisoning (39.7%). Other reasons for hospitalization include 'other' causes (22.8%), respiratory system diseases (12.2%), digestive system diseases (11.6%), musculoskeletal & connective tissue diseases (8%) and mental disorders (5.7%).

Hospitalizations for mental disorders constitute a major concern for male adolescents and data need to be reviewed to more thoroughly indicate their causes. One could hypothesize that these events reflect a higher degree of self-destructive or violent behaviour in male adolescents, but a further review of the data would prove beneficial.

Males also reflect a higher rate of hospitalization for musculoskeletal problems and these are most likely related to sport injuries.

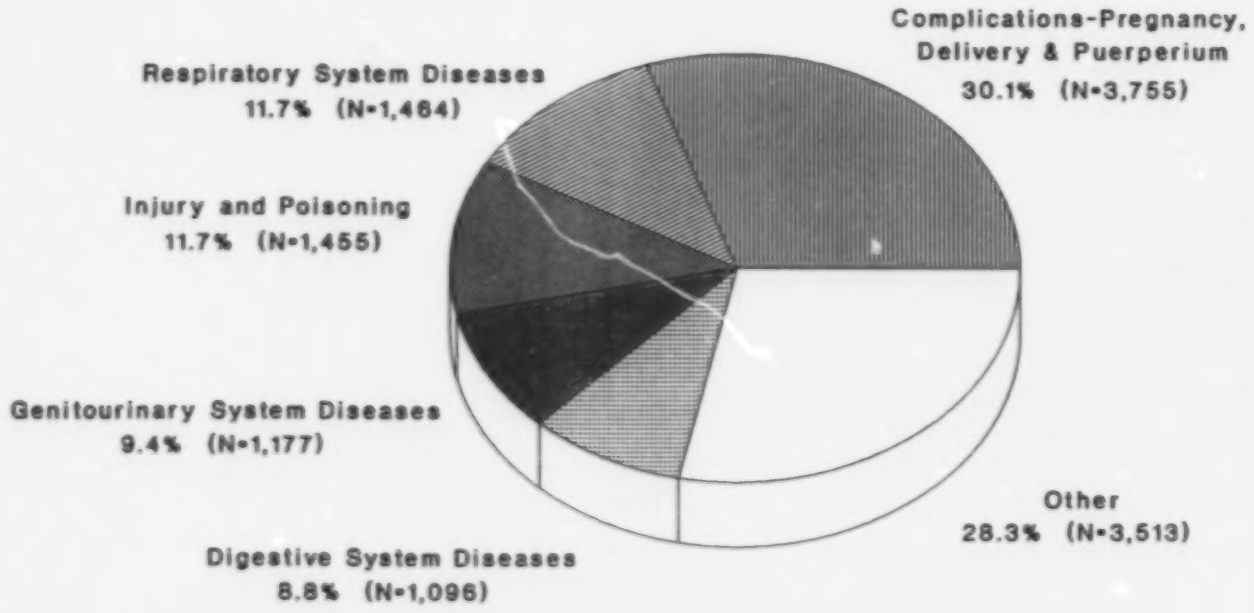
5.4.4 SUBSTANCE USE:

Drug and alcohol use and abuse among adolescents in British Columbia has traditionally received a great deal of attention. Patterns of drug and alcohol use are closely linked and as they are considered 'adult type' behaviours, most youths will explore, experiment with and make choices about their use. The link between motor vehicle accidents and drinking is well known in adolescence. What is not known is the extent of emotional or behavioural disorders linked to substance use and what percentage of young people go on to have health problems associated with the use of cigarettes, drugs or alcohol in adulthood. Emphasis in studies is placed on current usage of substances which are known to be harmful to one's health in both adolescence and adulthood.

1987

Six Leading Causes of Hospitalization in B.C.

Female/Age Group 15-19 Years Old
Total Number of Cases = 12,460



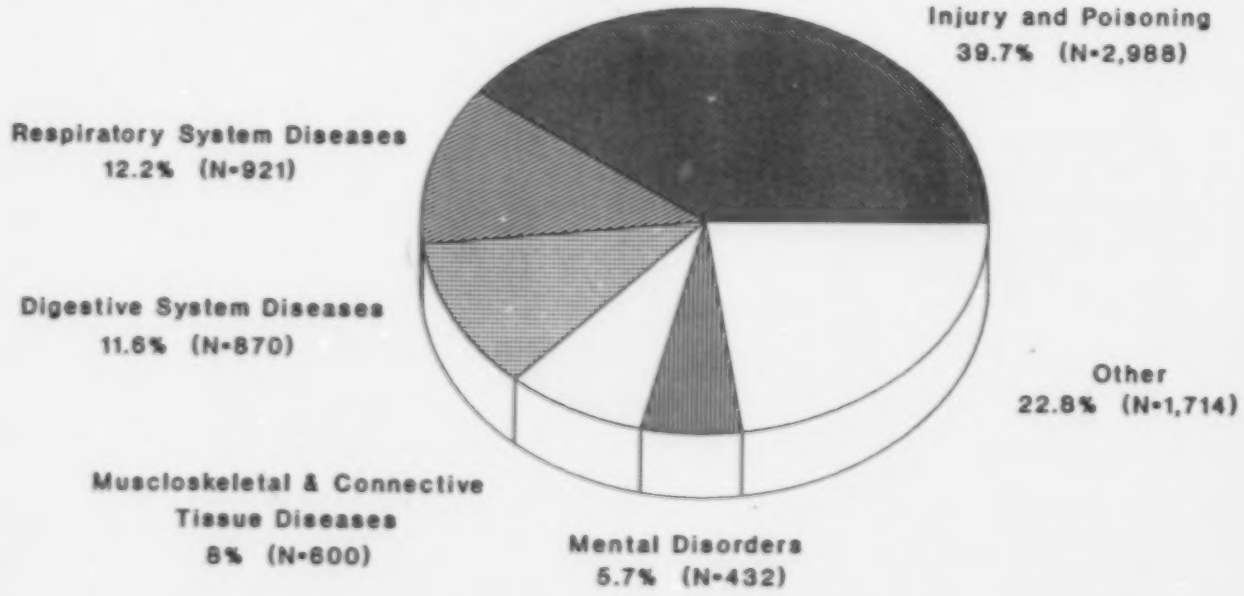
Source: Hospital Programs, 1987 (derived from HealthPlanning Database).

FIGURE 12

1987

Six Leading Causes of Hospitalization in B.C.

Male/Age Group 15-19 Years Old
Total Number of Cases = 7,525



Source: Hospital Programs, 1987 (derived from Health Planning Database).

FIGURE 13

The importance of smoking as a health risk has been well documented. Tobacco smoking will lead to more deaths for 15 year olds living today by age 70 than for deaths due to car accidents, suicide, homicide, AIDS and drug use combined. It is estimated that diseases caused by tobacco will kill 18,000 of these children before the age of 70. (70) Anti-smoking campaigns have demonstrated their effectiveness and the number of smokers in British Columbia is decreasing. The sex differences that once existed in adolescent smokers are no longer apparent. Males have declined in their smoking habits by over 50% since 1966 and there has been a 16% increase in the percentage of females smoking today. (71)

British Columbia has the lowest prevalence of smoking among young people in Canada as 13 % of adolescents report smoking daily compared to the Canadian average of 17% for the same age group. (72) Although not all adolescents report that they are daily smokers, data indicate that only 19% of grade 11 students; 13% of grade 9 students and 7% of grade 7 students smoke.(74) These percentages are below the national averages for same grade comparisons. Increased rates of smoking are found in children who drop out of school, have poor grades, have part-time jobs while in school, come from single-parent or lower income families, lower parental education, children who are less physically active, Native children and those with parents that smoke. (74) The value of health policy and legislation has been demonstrated in the area of smoking and enforcement of these initiatives will need to be continued in order to prevent the harmful effects of tobacco and second-hand smoke to children now and as they grow to adulthood.

British Columbia youth report the highest regular usage of alcohol, marijuana and other drugs when compared to youth in other provinces. In addition British Columbia youth use alcohol at an earlier age than their eastern counterparts (75). In a recent study of alcohol and drug use in adolescents in British Columbia, results showed that the usage of most drugs increases with grade and the greatest rate of increase in the use of tobacco, alcohol and cannabis occurs between grades 8 and 9. The use of glue and solvents was found to be highest in grade 8 and diminished with each subsequent grade. (76)

Results of the same study indicate that a significant proportion of adolescents consume substantial amounts of alcohol and have demonstrated personal or social difficulties due to its use. Almost 1/4 of the respondents reported being drunk at least once in the month before the study and 1/3 rd stated that they had had 5 or more drinks on at least one occasion during the same period. This fact coupled with the high rate of injury and mortality from alcohol related motor vehicle accidents reflects the risk adolescents take with their health while drinking. Respondents to the survey reported that 18.5% had demonstrated aggressive or destructive behaviour due to alcohol and 12.2% had been warned by police because of its use. The Canada Health Attitudes and Behaviour Survey (77) reported that 12 % of youth in British Columbia drink on a regular basis (2-3 x/wk) and demonstrates that by the end of high school, drinking is a regular habit for adolescents in the province.

The use of drugs other than alcohol and tobacco is much less common, but British Columbia adolescents report using cannabis more often than those in other provinces. Two percent of adolescents in British Columbia report using cannabis daily and 36% report having used it during the past year. (78) The use of other drugs reflects availability on the streets, but adolescents reported a high percentage of use for hallucinogens and prescription depressants (11.3%) in the year prior to the study. Cocaine use was reported by 6.1% of the survey respondents. (79)

5.4.5 SEXUALITY:

One of the hallmarks of adolescent years is the emergence of adult sexuality and maturation. Issues of reproductive health become more important as more adolescents become sexually active and expose themselves to the risk of pregnancy, teenage parenthood and sexually transmitted diseases.

A recent report indicated that by grade 9, 1/4 of British Columbia youth have had sexual intercourse at least once. (80) Frequency of sexual intercourse understandably increases with age and by age 19, 70% of adolescents are sexually active. Reports indicate that over 50% of sexually active adolescents engage in unprotected sexual intercourse. (81) The risk of teenage pregnancy is high and data indicate that teenagers are at higher risk than the remainder of the child bearing population for LBW infants who are at greater risk for illness and disability.

The social impact of teenage pregnancies is unknown, but an increasing number of teenagers are choosing to keep their babies. Long term data concerning maternal and child outcome would be helpful in determining health, economic, educational and social service needs for teenage parents. In 1986 the Child Health Profile Project found regional variation in teenage pregnancy rates (82). This variation in pregnancy rates for teenagers is important to determine regional service needs including: sex education and pregnancy control programs; contraception counselling and access to therapeutic abortions; support for teens carrying to term; prenatal care, nutrition and counselling; educational support for young mothers and most importantly, emotional, social and economic support during pregnancy and parenthood.

Male and female adolescents are both at risk for sexually transmitted diseases (STD's) and the incidence of these diseases in adolescence is unknown. The most notifiable STD is gonorrhea, but other diseases including chlamydia are not notifiable and are known to have greater risk of long term morbidity and infertility. Existing data were not reviewed for this report and need to be collected and analysed. Adolescents in British Columbia are more aware of the risk of AIDS and its transmission patterns when compared to other adolescents in Canada. (83) Compared with national results, British Columbia youth spend more time learning about AIDS than youth in any other province. Despite this knowledge a significant number of sexually active adolescents do not practice safe sex and continue to put themselves at risk for pregnancy and STD's. Youth are uninformed about the serious consequences of undetected STD's other than AIDS, and have unrealistic beliefs about their chances of becoming infected. It is known that adolescents are less likely to seek help for sexual behaviour and drug and alcohol use and it is critical that innovative ways of involving them in their health planning be created. There is a need for education programs that help young people in British Columbia develop appropriate health attitudes and adopt safer sexual practices.

5.4.6 EMOTIONAL WELL BEING/MENTAL HEALTH:

The largest gap in provincial and national health data concerning children is in the area of mental health and emotional well being. The burden of various mental illnesses is usually classified by psychiatric criteria (DSM-III) and measured by statistics such as hospital admissions/separations and average length of stay. The Canadian rate of admission to Psychiatric and General Hospitals for mental illnesses for children has remained steady since 1979, (84). British Columbia data were not reviewed for this report, however, Figure 14. indicates the number of children and youth treated by Mental Health Services in British Columbia in 1988. This data reflects two major factors. One is that there is gender variation in the use of Mental Health Services in the province with males utilizing more services in all ages up to and including 14 years of age. After 15 years of age, adolescent females utilize more mental health services than males. The other factor is that service utilization increases with age in childhood and that the greatest use occurs from ages 10-19 years. Lacking in this data are the reasons for mental health service consultation and a more detailed review would prove beneficial for health planning.

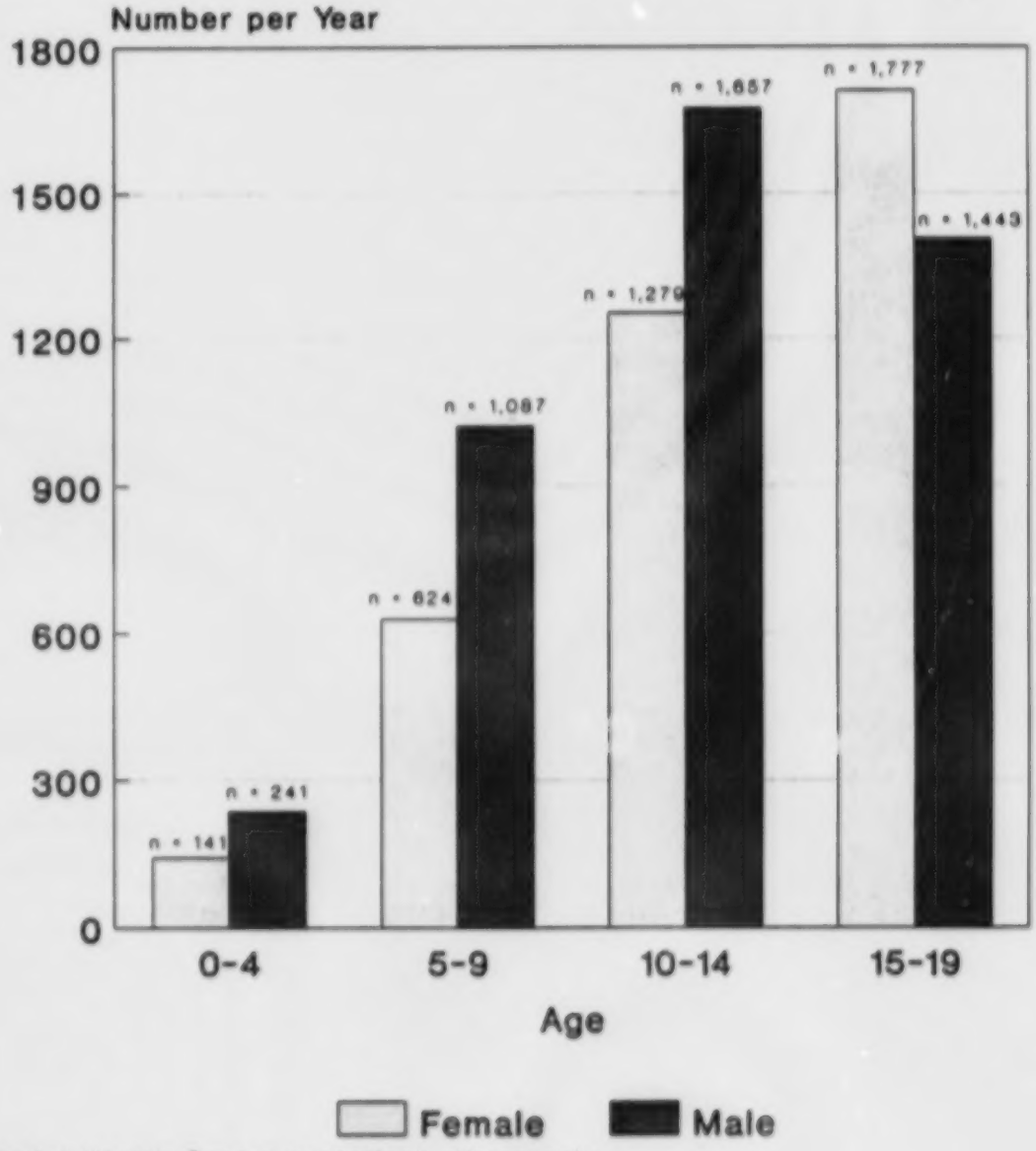
As was noted earlier, British Columbia data concerning prevalence rates for emotional or behavioural disorders in childhood is lacking. The most comprehensive study on the prevalence of children's behavioural disorders in Canada was carried out for the Ontario Child Health Study. Prevalence rates for four psychiatric disorders (Conduct Disorder, hyperactivity, emotional disorder and somatization) in children aged 4-16 were identified. A six-month prevalence rate for one or more of these disorders was found to be 18.1%. Gender differences in psychiatric disorders were found with conduct disorder being 4 times as common in boys; hyperactivity 3 times as common in boys and emotional disorder more common in girls. (85)

Studies of adolescents in British Columbia indicate that when compared to same-aged peers from other provinces in Canada, youth in British Columbia report higher rates of depression, more thoughts concerning suicide and a bleaker outlook on the future.(86) In addition relationships with parents of children in British Columbia seems to be less positive than in other provinces. Adolescents report that their parents expect too much of them, they have more arguments with parents and that they have the least happy home life in Canada when compared to adolescents in other provinces. Table 8. reflects the results of specific mental health items as reported by British Columbia adolescents when compared to national averages.

FIGURE 14

Children and Youth Treated By Mental Health Services*

British Columbia 1988



* Mental Health Centre outpatient clinics only.
Excludes clients of Greater Vancouver Ment. Hlth. Serv.

Source: Mental Health Services, 1988.

TABLE 8

Responses to Selected Mental Health Items Youth in British Columbia and Canada

1984 & 1987

	B.C.	Canada	Source
I wish I were someone else	11.2%	11%	(1)
I have confidence in myself	51.3%	55.2%	(1)
I need to lose weight	35.2%	34.5%	(1)
I often cannot sleep worrying about things	27.6%	23.4%	(1)
I often feel depressed	35%	32%	(2)
I sometimes have thoughts about committing suicide	27%	25%	(2)
The future looks good to me	70%	73%	(2)
I have a happy home life	73%	77%	(2)

Sources:

(1) King, A.J.C., Robertson, A.S., Warren, W.K. Canada Health Attitudes and Behaviour Survey, 9, 12 and 15 year olds, 1984-1985. Kingston. Social Program and Evaluation Group, Queen's University and Health and Welfare, Canada 1985.

(2) King, A.J.C., Beazley, R.P., Warren, W.K., Hankins, C.A., Robertson, A.S., Redford, J.C. Canada Youth and AIDS Study, Kingston Social Program Evaluation Group, Queen's University, and Health and Welfare, Canada, 1988.

The data reported in these surveys is alarming and indicates an area requiring further investigation. The major mental health concerns of children and adolescents in British Columbia need to be determined in order to define preventive and other health service needs. What would be helpful in this area of research is a broader view of mental health to include not just mental illnesses of the DSM-III type, but also mental "ill-health". A useful model for research in this area has been identified by Valerie Wilmot and indicates three priority areas for further research including:

1) prevention of maladaptive behaviours in children and youth (including alcohol and drug misuse, eating disorders, delinquent behaviours and suicide);

2) prevention of maladaptive behaviours of adults directed towards children and youth (including child abuse and exploitation, child sexual abuse, rejection and abandonment by parents, and discrimination on the basis of age or membership in an identifiable minority group); and

3) the mediating effects of social networks on mental health. (87)

The importance of family discord as a risk factor for mental health problems in adolescence also needs further investigation. The reverse of this is that family and other social networks may provide protection against physical or emotional problems. Further research in this area is required.

Adolescence is a period of high risk for the well-being of young people and their families. Patterns of ill-health and related behaviors indicate a time of turbulence and testing of authority. As young people 'graduate' from adolescence life-long health habits may already be well established.

Strategies aimed at improved health in adolescence need to be aimed at the development of support networks within the family, school, work and community settings. The involvement of adolescents in program creation and implementation needs to be encouraged and supported. Creative programs need to be designed and targetted for all adolescents living in the province.

Health needs include enforced legislation restricting the sale of alcohol and cigarettes to minors, enforced speed limits, closer surveillance of reckless, speeding and drinking drivers, seatbelt use, gun control and drug trafficking. Continued support should be given to anti-smoking campaigns, smoking legislation and drinking and driving campaigns.

Strategies that enhance peer counselling programs, survival skills, self esteem and social support networks are required and need the support of the Ministry of Health.

Adolescents also require access to adequate reproductive education and technologies which are sensitive to adolescent needs. Teenage parents require adequate prenatal care, nutrition and counselling, and economic, educational and social support. The Ministry of Health should support inter-disciplinary initiatives that meet adolescent needs in these areas.

Creative programs that provide family support for discordant families with referrals from schools, churches and community groups are needed to complement the existing health care system.

6.0 SPECIAL NEEDS GROUPS

6.1 THE POOR

"While the needs of children and youth may change as they grow, poverty remains the biggest obstacle to their full development ". (88) In support of this claim, almost all health indicators suggest an association between prevalence of death and illness and poor social and economic conditions. Among psychosocial variables, welfare status has been found to be one of the most strongly associated with poor health. (89) Children are vulnerable to the consequences of poverty and lack of money affects factors such as quantity and quality of food needed for normal growth and development, housing availability, educational and employment opportunities.

Today there is an increase in poverty among children who comprise the largest group of poor in Canada. (90) Despite a decline in the birth rate and the overall number of children living in British Columbia there is an increased proportion of them living in poverty. Approximately 126,300 children under the age of 15 years, or 20.2% of the child population in British Columbia are now living in poverty. In other terms, 1 in 5 children is living in poor circumstances in this province and this does not include the adolescent population. (91) Across Canada children under the age of 20 have a 56% higher death rate in the lowest 20% income range than in the highest 20% income bracket.(92)

Recognition of the link between poverty and diminished opportunities for a full and healthy life have been well documented and supported by government initiatives in the past. Government programs to counter the effects of poverty have been numerous and have included, unemployment assistance, schooling allowances, non-profit and public housing, family allowance and child tax credits. Currently there is a concern that this support is diminishing and that government programs have not kept pace with changes in economics, family structure and the role of family in society.

Welfare status is most strongly correlated with low income, but is higher among single parent families, those living in subsidized housing, those with low maternal education (especially grade 8 or less), large family size, overcrowding and urban residence.(93) Also at risk are Native families and those where the head of the household is less than 25 years of age.

Health problems are greater in those living in poverty and pose a threat to the well being of children. Infant mortality among the poor in British Columbia is twice as high as the national average and even higher in some regions. Mortality rates are highest for people in the poorest income levels. Lower life expectancy (94) and greater risk from fires, drowning, pedestrian motor vehicle accidents, suicide, homicide, low birth weight, chronic illness and functional limitations have all been documented. Children living in poverty are also at risk for being placed in child welfare and protection systems. (95)

Poor children are disadvantaged compared to middle class children in the areas of emotional adjustment and school performance. Parental welfare status has been found to be a marker for identifying children with greater risk of psychiatric disorder. The Ontario Child Health Study found that prevalence rates for psychiatric disorder were higher among boys whose families lived on social assistance and poor school performance was higher in girls whose families were on social assistance. No similar studies have been carried out in British Columbia, but one could speculate that the findings would be similar here. What is not known is what it is about welfare status that puts girls at particular risk for poor school performance and boys at greater risk of psychiatric disorder.

The issue of poverty and ill-health is one that needs to be examined in light of the devastating affect poverty has on the health of children and families. Inequities in income and opportunities are divisive and are a threat to children's physical, mental and spiritual health. The results of the Ontario Child Health Study indicate that both boys and girls living in families on social assistance are at particular risk for school and mental health problems. There is a need to apply the findings of this research in British Columbia and allocate resources for children and youth living in the province.

6.2 ABORIGINAL CHILDREN AND YOUTH

The quality of data on the health of the Native population in British Columbia is particularly wanting. This report does not provide a thorough review of the health of Native children in the province and further research is needed to be able to reliably report on their health status and needs.

What is known is that Native children and adults are the most socially and economically disadvantaged group in the province. Despite improvements in health status over the last few decades, the health of Natives remains significantly poorer. The health status of Natives in British Columbia is comparable to other developing or "3rd world" countries and reflect diseases of under-development, poverty, powerlessness and social isolation.

The Native population in Canada is comprised of the following groups: Status Indians, Non-status Indians, Metis and Inuit. There are 28,719 Registered Natives in British Columbia under the age of 20 years and children constitute a higher proportion of their total population than in the rest of the province (40% vs. 27%). The health care needs of Native children are particularly significant when one compares their health status with that of the remainder of the child population in British Columbia.

In Canada, life expectancy for Natives is 8 years less when compared to the remainder of the population. (96) Infant mortality rates have declined, but the Native rate is still two times that of the rest of the province (see Table 9). Natives are known to have significantly higher stillbirth rates and their children are at higher risk for deaths from all injuries including deaths from fires and drowning. Native adolescents are at particular risk for suicide and injury. Hospitalization rates for infectious diseases such as tuberculosis, meningitis, otitis media, hepatitis A and B, pneumonia and gastoenteritis are known to be higher for Natives particularly in their first year of life. A greater number of Native children are also known to be in care compared to the remainder of the child population.

In British Columbia there are many gaps in our knowledge particularly concerning variations in health status between bands and reserves and the major health concerns that are expressed by Natives. In Manitoba, Native communities have identified the major health concerns for their people and these include: alcohol abuse, anxiety, violence, spouse abuse, child abuse, attempted suicide, depression and solvent abuse. (97)

TABLE 9

Native Infant Death Rates Compared with Infant Death Rates

Rates/1,000 Live Births British Columbia 1975 & 1980

Year	Native Infant Death Rate	Year	Infant Death Rate for the Remainder of B.C.
1975	42.7	1975	11.2
1980	25.1	1980	11.0

Source: Vital Statistics Report 1980, p. 33.

The British Columbian government, health professionals and the general population would benefit from enhanced cultural sensitivity and a means of collaborating with Native leaders in order to find solutions to priority health concerns as identified by Native people themselves. Major improvements in the health status of aboriginal people including children, are likely to come from outside of the medical sector and may best be achieved through intersectoral approaches. Native children are particularly vulnerable to patterns of ill-health and the potential for change within this population needs further attention. If health promotion strategies are targeted at special needs groups it is paramount that differences in Native circumstances and cultural practices be taken into account. There is a need for the British Columbian government to attach priority and commitment to aboriginal health issues.

6.3 DISABLED CHILDREN AND YOUTH:

Good prenatal and perinatal care has led to the prevention of many childhood disabilities in the province. Despite this improvement in care, approximately 5% of the British Columbia population aged 1-14 are considered disabled with a slightly higher proportion among males than females (98)(see Table 10) and many of these children have greater than one disability.

Data on specific disabilities was not reviewed for this report, however children with permanent head injuries are listed on disability registers. Head injuries from falls, bicycle and motor vehicle accidents are preventable and programs aimed at reducing these injuries need to be supported by the Ministry of Health.

The health needs of children and adolescents with severe disabilities are harder to meet than those of the healthy child in British Columbia and often require more frequent care and sophisticated services. Disabilities will limit employment and income potential, and are costly in terms of therapy, education and special needs such as transportation and special aids (including eyeglasses, dentures, plates, braces, protective devices, drugs and wheelchairs).

Substantial amounts of health care resources are consumed in caring for disabled children and with the perceived shift in emphasis in the current health care system to that of the elderly, the special needs of disabled youth and children will need to be ensured.

Programs which focus on screening and the early detection of disabilities, injury prevention and the provision of family and community level care, are currently being implemented in the province. The full impact of integration or mainstreaming of children who are functionally limited is unknown. The implementation of these programs will need to be monitored in order that services to functionally impaired individuals and their families can be assured.

TABLE 10

Disabled Children in B.C.
1983-1986

1983-1984 (1)		1986 (2)	
Age 0-14 years:		Age 0-14 years:	
Males:	6.1%	Males:	5.1%
Females:	4.6%	Females:	4.1%
Total:	5.4%	Total:	4.6%

Sources:

(1) Canadian Health & Disability Survey 1983-1984. Statistics Canada. Health Division. July 1986.

(2) The Health and Activity Limitation Survey. Disability Database Program. Statistics Canada. Ottawa. May 1986.

7.0 SYNTHESIS

7.1 PRIORITY AREAS FOR ACTION

Four priority areas for action for children and youth in British Columbia are identified below. It is proposed that the Office of Health Promotion focus its programming for children and youth in these four areas. The areas were derived by synthesizing the data in this report and recognizing special needs groups in the province.

In addition to these four issues, there is a need to prevent the major health concerns of adulthood including heart disease, cancer, cerebrovascular disease, injuries, chronic obstructive lung disease and cirrhosis. All of these concerns are amenable to public health programs. It is recommended that these programs be implemented in childhood.

The four priority areas for action are presented as a starting point for discussions with the Office of Health Promotion and the Ministry of Health in general. The four are as follows:

1) the health care needs of '<u>special needs groups</u>', in particular:

   - Native,
   - poor, and
   - disabled children and youth;

2) the prevention of <u>low birth weight and prematurity</u>;

3) the prevention of <u>injury and poisoning</u> in children and youth; and

4) the promotion of emotional well-being or <u>mental health</u> of children and youth, and <u>family functioning</u>. This action area includes:

   - maladaptive behaviours in children (including abuse of alcohol and drugs, eating disorders, delinquency and suicide),

   - maladaptive behaviours in adults (including child abuse, exploitation and sexual abuse), and

   - the mediating effects of social networks such as the family on health.

7.2 GAPS IN RESEARCH

There are many gaps in our current research or knowledge base concerning the health of children in British Columbia. The list below is based on a review of the literature carried out for this report. Other areas of 'knowledge gaps' may be present and will need to be added.

In addition an up to date review of existing Ministry of Health programs for children and youth would prove beneficial.

In general, there are specific research needs that could be addressed and include the need for:

- aggressive application of research findings;
- a better, ongoing provincial health information system capable of functioning at the regional level; and
- periodic provincial and national health surveys targetted at the child and youth population.

More specifically, research needs in the following areas have been identified:

1) Health Indicators:
   - true 'health indicators' that do not focus on ill-health as a measure of health status
   - refinement of morbidity and mortality data by specific causes, eg. injury & poisoning: what is the actual cause here? MVA, bicycle, falls etc.

2) Regional Disparities:
   - more research and awareness of disparities between health units or regions of the province for all morbidity & mortality indicators (known regional disparities include: teenage pregnancy rates, caesarean section rates, IMR's, low birth weight babies, respiratory illnesses, stillbirths, suicides, adolescent violence, motor vehicle injuries)
   - more research is needed to determine the etiology of regional disparities as well as the most effective preventive programs

3) High Risk Groups:
   - an emphasis on research concerning 'inequities in health' is needed including those related to poverty and Native health
   - Native children's health
   - research concerning lone parent families and the impact on health and in particular, lone parent families headed by women

- research concerning protective factors; what are the factors that differentiate those at high risk who do not have poorer health status?

- research concerning protective effects of social support networks (including the family)

- research evaluating the impact of integration programs for disabled children

4) Injuries and Poisoning:

The need:

- for a coordinated approach to injury-related research;

- to look at regional variation in injury and poisoning morbidity and mortality;

- to support the National Childhood injury surveillance system: Children's Hospital Injury Reporting and Prevention Program (CHIRPP) linking 10 pediatric hospitals across Canada. Data here would be useful to determine the link between injuries and socioeconomic status;

- for research into the biomechanics of injury. This may increase our understanding of injury mechanics and lead to better design of environments, roads, sidewalks, traffic-lights etc.; and

- to evaluate preventive programs including the provision of bicycle helmets, pedestrian and bicycle safety education programs, anti-drinking and driving campaigns etc.

5) Mental and Emotional Well-Being:

The largest gap in provincial data is in the area of child and adolescent mental and emotional well-being. There is a need for:

- research looking at mental health in a broad sense including:

  i) maladaptive behaviours in children and youth (including alcohol and drug misuse, eating disorders, delinquent behaviours, and sexual abuse of children by adolescents),

  ii) maladpative behaviours in adults (including child abuse, exploitation, child sexual abuse, rejection, abandonment, and discrimination on the basis of minority group status), and

  iii) the mediating effects of social networks on mental health.

Specifically, research or application of research findings in other Canadian provinces is recommended in the following areas:

- prevalence rates for major child and adolescent emotional disorders in British Columbia. Regional analysis with long term follow-up would be beneficial;
- the extent of family discord and it's correlation with emotional well-being in childhood;
- adolescent suicides, risk factors, regional variation, protective factors, and assessment of effective prevention programs;
- emphasis on protective factors and/or coping mechanisms that children and youth utilize;
- evaluation of prevention programs for children and youth.

6) Respiratory Illnesses:

There is a need for research to:

- to determine regional variation and contributing factors such as parental smoking and environmental factors;
- evaluate preventive programs for respiratory illnesses;
- focus on high risk groups including Native and poor children as well as those living in regions with higher incidence of respiratory illness.

7) Other Health Issues:

SMOKING & PREGNANCY

There is a need:

- to determine smoking prevalence among pregnant women in the province and for research into effective smoking cessation programs for high risk groups.

REPRODUCTIVE HEALTH:

There is a need:

- to collect provincial and regional data for sexually transmitted diseases in children and youth
- for evaluation of reproductive education programs and services
- for assessment of regional reproductive health services for children and youth

NUTRITION

There is a need:

- for current provincial data concerning nutrition and dental health status in childhood
- to look at high risk groups (Natives, poor, minority groups and street children).

7.3 FUTURE CHILDREN'S HEALTH ISSUES

The real challenge of the future deals not only with the child, but also the family, community and society at large. Health issues likely to be of future importance to children and society include:

7.3.1 FAMILY ISSUES:

The majority of lone parent households in British Columbia are being headed by women, and many of these are living below the poverty line. Given this fact and research findings in Ontario it is realistic to expect an increase in mental health concerns and poor school performance among children and families living in poverty. Poverty will continue to threaten educational and employment opportunities for children living on social assistance.

New approaches to intrafamilial sexual abuse will require understanding and sensitivity in modifying behaviour change. Programs targetting both adult and adolescent abusers will be required to prevent the long term sequelae of abusive relationships.

All families have strengths and future health promotion strategies need to emphasize these strengths. Only by emphasizing family and individual competencies will the Ministry of Health be able to contribute maximally to the health of children.

7.3.2 ENVIRONMENTAL ISSUES:

Environmental issues are affecting the daily lives of children and adolescents living in the province. The home environment is critical to the development of children. Access to affordable housing and recreation spaces needs to be assured in the province as both are critical to the health of individuals.

Future concerns include; the supply of natural resources and parkland, the provision of alternatives to motor vehicle transportation including the construction of bike paths; enforcement of safety standards at school, at work and on the road.

- The Ministry of Health needs to support initiatives that emphasize environmental concern at home, school, work and in the larger community. Public policies that recognize, assess, and account for the environmental impact on health should be supported.

7.3.3 INEQUITIES:

Issues related to inequities in health will continue to affect high risk groups including the poor, disabled and Native people. Unless the government and society in general address the source of these inequities, solutions to disparities in health will not be found. Threats of an economic recession, unemployment, limited housing availability, restricted access to higher education and rising taxes will continue to have greater impact on disadvantaged groups in the province and more importantly on children and youth. Concern about the rising number of street children, hunger, malnutrition and exploitation of the young will continue.

In order for future health programs to be optimally effective, they must be tailored to diverse groups. "A major challenge for health promotion researchers and practitioners in the next decade will be to develop programs that are effective not only with middle classes, but with disadvantaged groups who often have restricted options and severe economic constraints and bear a disproportionate burden of health risks, disability and illness". (99)

7.3.4 SUBSTANCE USE:

Smoking, alcohol and drug use by pregnant women will continue to threaten infant mortality and morbidity. New drugs including 'ice', (methamphetamines) and other variations of cocaine will become available and will challenge health professionals taking care of drug dependent mothers and children in British Columbia. Issues of needle exchanges for IV drug users to stem the spread of AIDS will continue.

- Problems with alcohol and drug dependency will be best curtailed with programs that are sensitive to the broad cultural, socioeconomic and genetic factors related to drug dependency and are targetted at family or community therapy. Smoking cessation programs and health policies will need continued support and enforcement.

7.3.5 INJURIES:

The motor vehicle is likely to remain the most popular mode of transportation at least in the short-term future and will continue to be a threat to the health of all British Columbians. As net-migration to British Columbia continues there will be more vehicles and drivers on the road.

- Strict enforcement of seatbelt legislation, speed limits, motor vehicle inspections, driver education, drinking and driving offenses and the use of air-bags in vehicles will all help to decrease injuries from motor accidents. Engineering and structural considerations and the use of bicycle helmets will be needed to limit the number and severity of road accidents. Alternative modes of travel within the province will need to be considered.

7.3.6 ISSUES OF REPRODUCTIVE HEALTH:

Issues of birth control, sexually transmitted diseases and sexual freedom will continue to affect the health of children and youth. Alternative methods of controlling reproductive health and infections will likely emerge.

- Education strategies, health technology and government policy in the area of reproductive health will need to be sensitive to and keep pace with changes in the demographic and social make-up of the province.

7.3.7 EMOTIONAL WELL-BEING/MENTAL HEALTH:

Issues of isolation, self-esteem and self-fulfillment will continue to affect children and adults alike. The mental health of children needs to be considered in the context of the child, parents/caretakers, the child's family and human support networks.

- The Ministry of Health should support research in the area of child and adolescent mental health including protective mediators for health. Services that provide support to families rather than solely to individuals need to be encouraged. Provision of care within the family context will need to be supported as a preferred alternative to institutional care.

8.0 AND 9.0

Sections 8.0 and 9.0 of the report deal with issues related to the implementation of health promotion strategies for children and youth in the province.

8.0 NEXT STEPS

In order to achieve further improvements in the health of children and youth in British Columbia, one overriding premise needs to be considered.

8.1 OVERRIDING PREMISE

Currently there is a lack of coordination and commitment in directing child advocacy efforts in the province. Improved communication and networking on children's health issues with priorities for action will help to prevent duplication of efforts at all levels. There is a sense that challenges can only be met if some 'agency' takes on the role of leader and advocates to promote and argue for better child health. The Canadian Institute of Child Health has called for the development of a comprehensive National Child Health Policy (100) in order to solve identified problems in children's health. What needs to be addressed is what role, if any, will British Columbia take in formulating such a policy and who would take part in the process?

In addition there is a current sense that children's health services lack cohesion in the province and that various agencies and government ministries only take responsibility for one component of a child's being. In the past there has been resistance to change and an unwillingness of people to alter their traditional ways of working. Fragmentation of efforts has existed both within ministries and between them and new ways of dealing with children's health in the province need to be created. Interdisciplinary teamwork or partnerships are needed in order to shift away from the traditional emphasis on waiting for something to go wrong before intervention can occur.

The association between welfare status and health reflects what has already been accepted by many and that is, solutions to some health problems lie in the hands of people other than physicians. Many of today's child health problems cannot be resolved by the traditional system of personal care. The time is right to call for collaboration and partnerships in developing and evaluating alternatives to traditional hospital and patient centred care.

- The CHP should support interministerial and inter-disciplinary initiatives in child and adolescent health. The Ministry of Health should also reconfirm its commitment to an active interministerial process that determines and acts on priority health issues that affect children and youth in the province.

Many health cures lie in changing the national and provincial economy and quality of life rather than in biomedical manipulation. (101) Many preventive measures will impact on jurisdictions beyond health, and health is not necessarily a priority in these other sectors. In 1987, at the symposium on "Redesigning Relationships in Child Health Care" the need for health professionals to sit down with government planners to consider the map of British Columbia, the demography, and the needs, and then develop the kind of comprehensive child care service that will enhance the health of British Columbia's children and youth was identified. (102) This need is a priority today.

- The CHP should advocate for representatives of government, community, health professional and other constituencies to come together to identify priority areas for action for children and youth in British Columbia. This group should determine appropriate 'next steps' for British Columbia in the formulation of a provincial policy on child health.

Many partners will be required in order to affect change and each can be seen as having its own "level of influence". "It is now recognized that health promotion strategies must be directed not only towards individuals, but towards changing social norms, environments, policies, and resources that provide the context for individual health choices and action". (103) The following targets for change need to be considered:

8.2 TARGETS FOR CHANGE

8.2.1 THE INDIVIDUAL:

Each child and adolescent in British Columbia is dependent on their 'family', community and the government to develop their potential and to acquire the knowledge, skills and attitudes needed to achieve a healthy existence. Inequities in health status exist and these are beyond the influence of the individual alone. Although it is known that "prevention programs that focus extensively on voluntary behaviour change, even when properly designed and evaluated, are of limited effectiveness" (104), the value of the child as a mediator of change should not be underestimated.

- The CHP should endorse and support the involvement of children and youth in the design and development of health programs targetted at them.

8.2.2 THE FAMILY:

"Particularly for children, family health behaviours and environments shape emerging, health related lifestyle patterns". (105) Information concerning the family as a target for health promotion strategies is not extensive. The family system is not a single system with a uniform way of functioning and families vary in communication styles, degree of cohesion and decision making styles. Health behaviour has been associated with family cohesiveness and the promotion of autonomy in childhood. Children who experience autonomy are known to engage in more health promotion. (106)

- Health Promotion strategies should endorse the <u>family</u> as the preferred focus for health programming. The CHP should collaborate with major health program providers to ensure:

  i) that parents, children and youth are included in the definition of priority areas for action as well as the design and implementation of health programs targetted at them, and

  ii) that health promotion programs for young people are supported by family members.

8.2.3 PEERS:

The importance and value of peer counselling programs needs to be recognized as an effective modality for health promotion. In the 1988 Royal Commission report on the British Columbia Education system, peer programs were strongly supported and advocated for all students. Peer training programs are also now being conducted in community agencies and educational institutions throughout the province. (107)

- The OHP should support strategies involving peer support and counselling programs wherever possible.

8.2.4 THE SCHOOL SYSTEM:

Second only to the family, the school is a major focus of learning for children and youth growing up in British Columbia. Two recent initiatives in British Columbia have reaffirmed the value of the education system in promoting healthy choices for children and youth. In 1988 the Report of the Royal Commission on Education was presented with a commitment to 'Lifespan Education' Studies. These studies specifically relate to student experiences and everyday activities and include issues on nutrition, personal health, family life, fitness, mental health, community and environmental health, prevention of sexual and substance abuse, and AIDS.

Subsequent to the release of the report on the Royal Commission, the Ministry of Education developed through an inter-disciplinary, multi-sectoral process the 'Learning for Living' Curriculum which is to be implemented in the school system over the next few years. The new curriculum will focus on several issues affecting school age children including: careers, safety and accident prevention, substance abuse prevention, child abuse, family life, healthy living and mental well-being. Recognition of the potential to prevent illness and injury, contain health care costs and enhance quality of life are fundamental components of the program rationale. (108)

- The OHP should endorse the school system as a major focus of action in the promotion and awareness of healthy lifestyle choices. Assistance in the training of educators and support for the new 'Living and Learning' Curriculum should be given wherever possible. The Ministry of Health should provide resources to evaluate the impact of the new curriculum.

8.2.5 THE COMMUNITY:

Recent initiatives recognizing the importance of the community process in defining health, have included "KIDSPLACE" (109) and the "Healthy Communities Projects". (110) Communities throughout British Columbia and Canada are recognizing the value of mutual support and empowering individuals and communities to identify their own health issues and what to do about them. The catalyst that communities offer in promoting healthy environments and lifestyle needs to be recognized.

- The CHP should endorse the involvement of children in the process of community change. Support should be given to initiatives such as 'Healthy Communities' and 'Nobody's Perfect' which promote the health of community members.

8.2.6 HOSPITALS & HEALTH PROFESSIONALS:

Traditionally medical and scientific agendas have placed emphasis on finding and understanding the causes of ill-health and not on preventing problems before they occur. The traditional health care system which focuses on individual patient care, consumes over 90% of health care expenditures. There is a need to reorient the health care system beyond clinical and curative services and to adopt innovative and alternative models of care.

"Hospitals have to make a strong commitment to health promotion as something valid" and become true health centres as they will continue to be targets for cost containment measures. (111)

- The CHP should promote and support health care programs that; utilize the family as a focus of care, place greater emphasis on out-patient care, involve individuals and communities in decision-making about their health, link services and facilities in the community which provide alternative models of care, and provide retraining for care providers. Programs that encourage client decision-making and independence should receive priority.

8.2.7 THE GOVERNMENT:

There is a need for the British Columbian government to take leadership in stating renewed commitment to the health of children and the family. Only by investing in children and youth will the future of this province be assured.

- The CHP should encourage the Ministry to reconfirm it's commitment to an active interministerial process in child health. The CHP should also participate in this process to advocate for action in the four priority areas outlined in this report.

9.0 CONCLUSIONS AND RECOMMENDATIONS

In 1986, Epp outlined a Framework for Health Promotion that implied encouragement of healthy choices through healthy public policy, creation of supportive environments, priority setting, developing personal skills, reorienting health services beyond clinical and curative services while respecting cultural needs and focussing on the total needs of the individual who exists as a whole person within a larger system of family and community. (112)

No simple set of strategies exists, but programs that are integrated and comprehensive; involve parents and children in their implementation; and take full account of the complex and rapid changes affecting families, the social and cultural climate of the society, will have greater impact. (113)

If one of the aims of the Ministry of Health is <u>health for all children</u>, then agreement must be made as to what are the major challenges in children's health. It is already known that the health of children and youth will not be improved by simply focussing on personal health issues and spending more on medical care.

Future challenges for the Ministry of Health regarding children's health will need to emphasize reducing inequities in health care, and maximizing one's opportunities to achieve optimal personal health.

The following recommendations may assist the Office of Health Promotion in beginning to address these future challenges:

A. INTERSECTORAL ACTION:

The Office of Health Promotion should participate in intra and interministerial committees in order to advocate for the setting of appropriate priorities, action strategies and health policies which would enable children and youth to reach their full health potential. These would be determined in concert with other government, health professional and community partners.

B. PRIORITY SETTING:

The Office of Health Promotion should recommend that the interministerial committee focus on the four priority areas for action outlined in the report ie. the health needs of native, poor and disabled children and youth; the prevention of low birth weight and prematurity; the prevention of injury and poisoning and the promotion of emotional well-being of children and youth. Provincial health goals and objectives should be established in these areas in 1990.

C. APPROACH/FOCUS:

I. FAMILY:

a) The Office of Health Promotion should endorse the family as the preferred focus for health programming.

As an active participant with major health program providers the OHP should advocate for the following:

- that parents, children and youth be included in the definition of priority action areas as well as the design and implementation of health programs targetted to them,
- that health promotion programs for young people be supported by family members, and
- that peer support programs be encouraged particularly in cases where families are not functioning optimally.

b) The Office of Health Promotion should recognize that not all families have the resources to ensure optimal health for their children.

- The OHP should recommend continued endorsement of programs including:
  - i) those that focus on prenatal outreach in regions of the province with low birth weight above the provincial average
  - ii) implementing "Nobody's Perfect" on a province-wide basis, and
  - iii) supporting Native health initiatives through participation in intraministerial committees.

c) The Office of Health Promotion should endorse supportive care programs and services for children and their families.

- The OHP should recommend the support of creative child care and youth programs which are provided within the family context as a preferred alternative to institutional care.

II. SETTINGS:

The Office of Health Promotion should endorse both the school system and the community as primary foci for action in promoting awareness and adoption of healthy lifestyle choices for children and youth and for the creation of environments that support health.

- The OHP should recommend:

  i) providing assistance and support for the training of educators for the Ministry of Education's 'Living and Learning' Curriculum,

  ii) development of the "Healthy Schools" program,

  iii) continued support for 'Healthy Communities' initiatives including programs such as KIDSPLACE particularly in high growth areas of the province, and for inner-city and Native children, and

  iv) encouraging evaluation of these programs.

D. HEALTHY PUBLIC POLICY:

The Office of Health Promotion should endorse healthy public policy that impacts positively on children and youth in the province.

- The OHP should recommend that policy initiatives be pursued in the following areas:

  i) the implementation of tobacco use reduction strategies that restrict access to tobacco for minors and discourage smoking initiation among young girls in particular,

  ii) the enforcement of seatbelt legislation, speed limits, motor vehicle inspections, the use of bicycle helmets and drinking and driving penalties to decrease child injuries from motor vehicle collisions,

  iii) the development of strategies in the area of reproductive health and sexually transmitted diseases which are sensitive to and keep pace with changes in the socio-demographic make-up of the province and values of its citizens, and

  iv) the development of safe consumer products and medication dispensation to diminish poison risks for pre-school children.

E. RESEARCH:

The Office of Health Promotion should collaborate with members of the interministerial committee to identify health research priorities for children and youth in the province.

- The OHP should initiate a study of the health needs of poor children in the province.

- The OHP should recommend that the Hospital-Community Partnership Program support research in the four priority areas for action outlined in the report.

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